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MAJOR CROP PROGRESS AND WEATHER REPORTING

TASKS OF SUGAR BEET GROWERS IN NON-CHERNOZEM ZONE

Moscow ZAKUPKI SEL'SKOKHOZYAYSTVENNYKH PRODUKTOV in Russian No 7, Jul 83 pp 10-12

[Article by M. Bessonov, deputy chief of the state inspectorate for procurement of industrial crops of the Ministry of Procurement RSFSR, under the rubric "Components of the Food Program": "Essential Concerns of Beet Growers in the Non-Chernozem Zone"]

[Text] The April 1983 meeting of the CPSU Central Committee pointed out the necessity of insuring stability of crop farming and significantly raising its productivity. This demand applies completely to increasing production and procurement of sugar beets also.

Sugar beets have been raised in the Non-Chernozem Zone since long ago. The first sugar refinery was started in the town of Alyabevo in Tula Province in 1802. It produced 120 poods of white sugar. At the present time production of sugar beets -- the basic raw material for making sugar -- is concentrated in Orel, Ryazan, Tula, Bryansk, and Gorky oblasts and in the Mordovian ASSR. In this zone 795 kolkhozes and sovkhoses are engaged in their cultivation. Twelve sugar mills with a capacity to process more than 22,000 tons of beets a day operate here.

By the end of the five-year plan kolkhozes and sovkhoses of the Non-Chernozem Zone are expected to sell 2,490,000 tons of sugar beets to the state, from which about 250,000 tons of sugar must be produced.

The task put before agricultural and procurement organs, as we see, is an important one. In the first three years of the current five-year plan production and procurement of sugar beets must be significantly increased in comparison to the actual level achieved; quality of output procured must be improved; and in addition, yield from each hectare of beet producing fields must be raised.

The state allocates significant material resources for development of beet cultivation and raising the economy of beet growing farms. Beginning in 1983 higher state purchase prices for sugar beets and supplements to purchase prices for agricultural output sold to the state by low-profit and planned-loss kolkhozes and sovkhoses have been in effect. A 50 percent supplement to the purchase price is paid to farms for sugar beets sold to the state at an average level higher than what was attained in the 10th Five-Year Plan. Norms of sale

of sugar to beet growers at privileged prices, a bonus system of payment to management personnel and specialists from kolkhozes and sovkhozes, and other economic stimuluses have been developed.

Mineral fertilizers, toxic chemicals, planters, cultivators, sets of six- and four-row harvesters, beet loaders, and other equipment for cultivation, harvesting, and hauling sugar beets are allocated to beet growers of the Non-Chernozem Zone in quantities which increase every year.

Nevertheless, despite this help on the part of the state, farms of the Non-Chernozem Zone did not fulfill plans for production and procurement of sugar beets in the 10th Five-Year Plan nor in 1982. For example, farms in Ryazan Oblast fulfilled only 77 percent of the plan assignment for sugar beets in the 10th Five-Year Plan and 90 percent in 1982, while corresponding figures for other places are: Mordovian ASSR -- 77 and 89; Bryansk Oblast -- 77 and 78; Tula Oblast -- 55 and 82; Orel -- 40 and 55; and Gorky -- 49 and 39 percent.

Nevertheless, one should say that in all these oblasts of the Non-Chernozem Zone the possibility exists to grow high and stable yields of sugar beets and to fulfill plans for their sale to the state. This is illustrated by results of the work of certain rayons and farms in this zone where, thanks to well-organized labor and skillful utilization of the whole set of scientific farming practices with introduction of scientific achievements and progressive know-how, farms achieve high and stable yields of sugar beets and overfulfill plans for their procurement. For example, in Pronskiy Rayon of Ryazan Oblast specialization and concentration of the production of sugar beets was carried out. Four farms in the rayon which were close to the processing point began to cultivate them. On the whole the plan for purchasing this output was fulfilled by 114 percent in the last five-year plan and by 108 percent in the first two years of the current one. In seven years these farms of the rayon sold 96,000 tons of sugar beets to the state.

Laborers of Starozhilovskiy Rayon in this oblast, Novomoskovskiy Rayon in Tula Oblast, Atyashevskiy Rayon in the Mordovian ASSR, and a number of others achieved notable successes in production and procurement of sugar beets.

The Kolkhoz imeni Lenin in Novomoskovskiy Rayon of Tula Oblast organized work on fulfilling plans for purchase of sugar beets in an exemplary manner. For many years it has fulfilled negotiated advance contracts and sells about 8,000 tons of sugar beets to the state every year. The Kolkhoz imeni Gorky in Atyashevskiy Rayon of the Mordovian ASSR sold 11,172 tons of sugar beets (139 percent of the plan) yearly in the 10th Five-Year Plan and in 1982 this farm sold 14,250 tons of beets to the state while the plan called for 9,050 tons (157 percent of the plan).

In the last seven years the Kolkhoz imeni Chapayev in Miknaylovskiy Rayon of Ryazan Oblast, the Soyuz Sovkhoz in Sevskiy Rayon of Bryansk Oblast, and others have been consistently fulfilling plans for procurement. But unfortunately, there are few of these examples. And it is not accidental, therefore, that in the last five-year plan farms in the Non-Chernozem Zone delivered upwards of 7 million tons of sugar beets less than planned, and were 1,422,000 tons short

in 1981-1982. An especially large number of the kolkhozes and sovkhoses which did not fulfill the plan for sale of sugar beets to the state are in Gorky and Bryansk oblasts.

Ichalkovskiy Rayon in the Mordovian ASSR fulfilled the plan for purchase of sugar beets by 64 percent in the 1st Five-Year Plan, 41 percent in 1981, and 53 percent in 1982. In 1982 only three of 17 farms which raise sugar beets fulfilled the plan while 11 kolkhozes and sovkhoses have not fulfilled the established state assignment once in the last seven years. The Mikhaylovskiy Sovkhoz of Kurkinskiy Rayon in Tula Oblast has not fulfilled the plan for purchases once in the last seven years either. In 1982 this farm sold only 1,174 tons (34 percent) while the plan called for 3,440 tons.

The table below shows the amount of sugar obtained from each hectare in the Non-Chernozem Zone in recent years.

Sugar Production per Hectare in the Non-Chernozem Zone
(in quintals)

Name of Oblast or ASSR	1976-1980, Average	1981	1982, Preliminary Figures
Bryansk Oblast	9	14.4	10.87
Orel Oblast	6.4	7.5	7.8
Ryazan Oblast	6.9	6.0	7.0
Tula Oblast	8.4	12.7	15.8
Gorky Oblast	5.7	3.1	5.2
Mordovian ASSR	7.9	6.7	7.2

As is apparent from the statistics cited, a notable increase in yield of sugar per hectare is evident in Tula Oblast, while it increased somewhat in Orel and Bryansk oblasts, and decreased in Gorky Oblast and the Mordovian ASSR.

State inspectorates for purchases and quality of agricultural products of rayons, oblasts, and autonomous republics of the Non-Chernozem Zone together with managers of kolkhozes and sovkhoses, agricultural organs and other organizations of the agroindustrial complex must take measures to overcome the lagging which has been permitted in state purchases of sugar beets and look for additional resources of this output in order to not only fulfill the plan-order of the state in 1983 but also to compensate for the underdelivery of output in the past two years of the current five-year plan. In addition, production of sugar from each hectare needs to be increased.

In a number of kolkhozes and sovkhoses of the RSFSR the improper practice of overstating the gross harvest in production-financial plans has taken root. The unrealistic yield, as opposed to actual yield, is not backed up by scientific

farming practices. For example, in 1982 at beet growing farms in Orel Oblast the plan called for a yield of 156 quintals from each hectare of sugar beets whereas the average in the 10th Five-Year Plan and in 1981 was only 75 quintals harvested per hectare. In 1983 the plan for the whole oblast calls for a yield of 161 quintals per hectare, which is almost twice last year's yield. Similar cases occur in a number of farms in Gorky, Bryansk, Tula, and Ryazan oblasts. For example, the Spartak Kolkhoz in Mikhaylovskiy Rayon of Ryazan Oblast planned for a 100-quintal per hectare sugar beet yield in 1983, while in 1976-1980 the yield per hectare averaged 69 and in 1981-1982 it was 43.

This is why state inspectorates which have identified such shortcomings should, together with managers and specialists at the farms and contractors, take proper measures, including scientific farming and organizational ones, when delivering plans to the farms, concluding contracts, and especially when reconciling negotiated contracts, in order to insure that the advance contracts for sugar beets are realistic and feasible.

One reserve for increasing state purchases of sugar beets is raising their "marketability" [percentage of beets reaching market]. Analysis shows that many kolkhozes and sovkhoses fail to deliver significant quantities of raw sugar beets to the state, and state inspectorates have tolerated these cases. In the 10th Five-Year Plan the marketability of sugar beets in the Non-Chernozem Zone decreased by four percent in comparison with the 9th Five-Year Plan, and amounted to 86 percent whereas for all the RSFSR the average was 89 percent.

Marketability at kolkhozes and sovkhoses in Gorky, Orel, and Ryazan oblasts is especially low. The Sovetskaya Rossiya Kolkhoz in Zalogoshchenskiy Rayon of Orel Oblast fulfilled nine percent of its plan for procurement of sugar beets in 1982, and its marketability figure was 55 percent. A number of beet growing farms have begun producing sugar beet crops for livestock feed rather than for the refineries, which had earlier been categorically forbidden. Such a situation in effect "legalizes" the use of industrial beets for livestock feed, and this is difficult to check on. For this reason, state inspectorates of the Non-Chernozem Zone should make a fundamental improvement in their practical work to increase the marketability of sugar beets and raise the figure to 90-92 percent in the coming year.

Ways to raise marketability of sugar beets are commonly known. They are primarily reduction of losses of beets during the harvest, mainly thorough improved harvesting, prompt hauling from kolkhoz and sovkhos fields, and also significant improvement of motor transport work during the shipping of this output. The challenge is to prevent or minimize losses of beets during harvest, transport, storage, and processing, that is, at the junctions between agricultural production and the following stages on the way to the finished product -- sugar.

But unfortunately, losses of sugar beets are still high.

Inspections by personnel of the state procurement inspectorates have established that at many kolkhozes and sovkhoses many sugar beets are left in the ground because of poor quality harvesting work. Often this occurs because of incorrect adjustment of beet harvesters. Many kolkhozes and sovkhoses start the harvest

late and do not fulfill the approved schedules for harvesting. The result is that the whole complex of jobs occurs in difficult weather conditions. In such cases the quality of output leaves much to be desired.

Not all farms have organized collection of sugar beets after the combines and reploting of the harvested areas. In 1982, for example, in Orel, Ryazan, Gorky, and other oblasts of the Non-Chernozem Zone losses of sugar beets were up to 35 quintals per hectare at a number of farms. At the Sovetskaya Rossiya Kolkhoz in Novoderevenkovskiy Rayon of Orel Oblast, for example, losses on a harvested area of 90 hectares (out of 250 hectares to be harvested) amounted to 30-35 quintals per hectare with a yield of 100 quintals on the day of the inspection. They are especially high on the edges of sugar beet fields, that is, on the turning strips, which are usually not marked out.

A serious shortcoming in organizing procurement of this important product and in reducing commodity resources is untimely hauling from kolkhoz and sovkhoz fields.

Every year in a number of rayons and farms of the Non-Chernozem Zone, large quantity of sugar beets are found in uncovered piles and strips in the fields. As a result weight is lost and the quality of the beets declines. Especially large piles of beets in the fields were observed at kolkhozes and sovkhozes in Shatskiy Rayon of Ryazan Oblast. During last year's harvest season, in October, more than 24,000 tons of beets or 76 percent of all those dug up, were found in the fields. At the Shatskiy Sovkhoz of this same rayon, only 176 tons of the 6,280 tons dug up in the same period were sold to the state. Similar cases have occurred in Orel, Tula, and Gorky oblasts.

The basic reasons for the delay in hauling sugar beets in a number of places are unprompt cleaning and preparation of the root for delivery because of poor organization of loading work in the fields and the inability of the kolkhozes and sovkhozes to provide high-productivity SPS-4.2 beet harvesters. At a number of farms motor transport designated for hauling sugar beets was used in other jobs. There were cases where motor transport was idle because of a lack of fuel and lubricants.

All this resulted in the output per vehicle being very low. For example, whereas output per vehicle throughout all of the RSFSR from the first through the third of October 1982 amounted to 11 tons a day, in Gorky and Bryansk oblasts and the Mordovian ASSR it was five tons, in Tula Oblast seven, and in Ryazan Oblast it was eight tons a day.

State inspectorates of beet growing rayons of the Non-Chernozem Zone must intensify control over the quality of harvest work at kolkhozes and sovkhozes and make sure that loading equipment, motor vehicles, and other transport are used in a highly efficient way.

Significant losses of sugar beets occur in the final state of procurement -- during storage at beet-receiving points, because of shortcomings in the preparation of the material-technical base of procurement organizations.

Many beet-receiving points even now are not equipped with essential machinery for weighing and unloading large trucks and do not have paved areas with active ventilation, laboratories, and equipment for receiving sugar beets with consideration of their sugar content. For example, at the Ukholovo, Novomichurinsk, and Aleksandro-Nevskiy beet-receiving points in Ryazan Oblast only 10-15-ton truck scales were operating, and at the Verdovsk, Remizov, Yagodnoye, Korablino, Luzhkovsk, and Khrushchevo beet-receiving points there were no weighing facilities at all.

The condition of the material-technical base of the Verdovsk beet-receiving point in this oblast causes particular concern. This base procures beets from 23 farms in Sarayevskiy Rayon and five farms in Sapozhkovskiy Rayon for a total of advance contracts of 61,000 tons. It does not have its own storage pits, truck scales, loading areas, or railroad spur. Back in 1976 a decision was made to construct a new model beet-receiving point, but at the present time construction has been suspended. The laboratory which was built and the unfinished administration building are becoming unuseable and the truck scales are being taken apart.

Managers of Rosssakharprom [Russian Sugar Industry] of the Ministry of Food Industry RSFSR know about this, but they are taking no measures. It is essential to do everything to insure that the beet-receiving point begins to operate in 1983.

In Tula Oblast only two of the 11 beet-receiving points have paved areas with active ventilation. Approximately the same situation exists in the Mordovian ASSR also. There are other cases of poor management as well. For example, at the beet-receiving point attached to the Lopandino sugar mill in Bryansk Oblast, the existing 12 ventilating units have not been installed for three years. Significant shortcomings in preparation of the material-technical base were noted in the work of beet-receiving points in Gorky Oblast and in the Mordovian ASSR.

State inspectorates in the rayons of the Non-Chernozem Zone, together with agricultural organs and procurement organizations, must take measures to regulate raw materials zones and to bring sugar beet crops closer to the sugar mills. In order to reduce the hauling of beets and cut the time it takes to remove them from the fields, where necessary, questions of the organization of temporary beet-receiving points near railroad stations and paved roads must be resolved before the harvest begins. Control must be exercised over the building in 1983 of mechanized warehouses and paved areas with active ventilation. In addition, weighing facilities and unloading equipment for beets being delivered by train and in large-capacity trucks must be prepared in time.

We must conduct a decisive battle against sugar beet losses at all stages of production and procurement, reveal cases of losses promptly, and introduce practical suggestions to eliminate shortcomings noted which reduce the marketability of raw beet resources.

We must devote particular attention to controlling accuracy of accounts with kolkhozes and sovkhoses for output delivered in connection with the increase in state purchase prices; payment of the 50 percent supplement to state purchase prices for sugar beets to the state beyond the average level achieved in the 10th Five-Year Plan; and of other accounts.

Strict control is needed over the quality of sugar beets delivered by kolkhozes and sovkhoses and over the accuracy of receiving and determination of quality indicators of the raw beets at beet-receiving points.

All farms and procurement organizations must take active measures for overcoming lags in fulfilling plans for procurement of sugar beets. It is essential to step up organizational work on finding additional resources of this output in order to obtain as much sugar as possible from each hectare of beet fields in the Non-Chernozem Zone and to make a worthy contribution to the Food Program.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

EFFICIENT PREPARATION FOR SUGAR BEET HARVESTING URGED

Kiev PRAVDA UKRAINY in Russian 10 Aug 83 p 1

/Article: "Sugar Beet Harvesting Campaign"/

/Text/ Labor intensity is now high in the republic's fields. After the conclusion of the harvesting and threshing of early grain crops soil is being prepared for the future harvest, hay is being accumulated everywhere and many southern farms are harvesting corn for silage. The day when the harvesting campaign will begin on sugar beet plantations is not far off.

This year our main industrial crop is to be harvested from an area of 1,727 million hectares. A total of 50 million tons of raw materials (in standard weight) are to be delivered to the sugar industry. This assignment is not easy, but realistic. Considerable work on the implementation of the Sakhar /Sugar/ goal-oriented overall scientific and technical program has been done and sugar beet growers in many oblasts, taking into consideration the lessons of past years, have applied maximum efforts in order to grow a high harvest of sweet roots. The efforts of agroindustrial associations must now be directed toward the preparation for harvesting work and the hauling of raw materials. The following task has been set: To complete the digging of roots before 25 October and to deliver them to sugar beet receiving centers before 31 October.

The success of this endeavor will depend to a decisive degree on the level of technical readiness and the degree of reliability of harvesting and loading equipment and on an efficient interaction of all the links of the harvesting-transport conveyer. This year with due regard for what will be obtained during the third quarter 18,322 six-row complexes, 4,100 KST-ZA three-row combines and a large number of loaders should go out to plantations. The available equipment makes it possible to gather the harvest on the dates set. However, in order to attain this, it is necessary to repair every complex and loader in a high-quality manner.

On the whole, the rates of repair of these machines are slightly higher than last year. This matter is best organized in Kiev and Khmel'nitskiy Oblasts. The coefficient of equipment readiness in Vinnitsa Oblast is also higher than the average republic coefficient. At the same time, we must not close our eyes to the fact that the bulk of sugar beet harvesting combines on farms in Mogilev-Podolskiy and Barskiy Rayons and of sugar beet loaders in Peschanskiy and Trostyanetskiy Rayons are not yet ready to go out to the field.

Unfortunately, similar signals are also received from other oblasts. They indicate that in a number of places party and Soviet bodies have slackened their attention to the activity of repair services of kolkhozes and of rayon agricultural equipment associations. The situation must be rectified without delay.

For many farms the sugar beet harvesting campaign is also complicated owing to the fact that the weight of both the roots themselves and of tops is much greater than during preceding years. Therefore, it is very important to see to it that machine operators are able to competently, with due regard for a specific situation, regulate the sugar beet harvesting complex and loader. In a number of oblasts--Poltava, Kharkov, Ternopol and Dnepropetrovsk--before going out to a plantation every machine operator once again undergoes a distinctive recertification for the ability to correctly regulate complex harvesting equipment. Courses are organized for those who are not familiar with this.

Such a practice deserves the widest popularization in all other sugar beet planting oblasts. First of all, councils of rayon agroindustrial associations should be concerned with this. This matter must be organized so that all machine operators mandatorily take examinations in the regulation and adjustment of combines and loaders.

Is this alone to reduce losses to a minimum? For example, the people of Vinnitsa Oblast schedule the gathering and carting out of the harvest so as to maximally reduce the gap between these two operations and to avoid the accumulation of sugar beets in plantations. This experience deserves to be popularized.

At the same time, it is necessary to take into consideration in advance the fact that in a number of cases a certain amount of roots will still be accumulated in the field. Therefore, to avoid their spoilage and sugar losses, it is necessary to provide for the placement of the dug out roots in temporary field clamps. Both rural workers and their partners in the agroindustrial complex--collectives of sugar plants--should equally share the concern for this. The republic's Ministry of the Food Industry must give the most efficient help to sugar beet planting farms in the organization of the field clamping of roots and allocate a sufficient amount of covering material for this purpose.

The fate of the grown harvest will depend to a significant degree on the efficient and regular work of motor vehicle drivers. Last year in Kobelyakskiy Rayon, Poltava Oblast, in Mogilev-Podolskiy Rayon, Vinnitsa Oblast, in Krasniy Rayon, Khmel'nitskiy Oblast and in Zolotonoshskiy Rayon, Cherkassy Oblast 80 percent of all the transport facilities allocated for the conveyance of raw sugar materials were assigned directly to farms and the rest were attached to rayon harvesting staffs. As a result of such a concentration of motor vehicles, the gap between the digging and carting out of sugar beets was reduced markedly and the utilization of motor transport was improved.

Such a practice will now be applied everywhere. In order that it may bring the highest effect, farms should promptly concern themselves with the front of work for motor vehicle drivers and with the creation of proper living conditions for them. Of course, this range of problems must constantly be in the field of vision of soviets of people's deputies and local party bodies. They should once again review in every rayon, farm and enterprise the structures of staffs, groups and control centers called upon to ensure an operative management of the harvesting, transportation and acceptance of sugar beets.

To a great extent the regularity of the field-sugar plant transport conveyer is determined by the organization of the acceptance of raw materials. Therefore, the prompt preparation of sugar beet receiving centers and sugar plants for the season acquires such importance. During the remaining time it is necessary to once again check and, where necessary, to put in order weighing facilities, clamp forming machines, complexes for the unloading of large-tonnage motor vehicles and motor trains and lines for the determination of the general contamination and sugar content of sugar beets.

The preparation of the entire technical arsenal for the forthcoming harvesting campaign must not relegate the concern of sugar beet growers for the care of plantations to the background. Machine operators in Vinnitsa, Rovno, Khmel-nitskiy and a number of other oblasts have already carried out the fourth loosening of soil in interrow spacings. In order not to damage plants and not to cover them with earth, they have equipped cultivators with top removers and special fenders. Care of crops must be continued right up to the beginning of mass digging, since this not only increases the yield, but also facilitates the operation of harvesting equipment.

Every measure must also be taken to clear the areas planted with sugar beets of weeds. Unfortunately, the percent of overgrown plantations is high in Korsun-Shevchenkovskiy, Drabovskiy, Kamenskiy and Smelyanskiy Rayons in Cherkassy Oblast and on a number of farms in Vinnitsa Oblast and in some other oblasts. Agronomical services should also constantly observe crops in order not to let pests and diseases spread on plantations and to promptly suppress them.

The sugar beet harvesting campaign is getting nearer and nearer. To carry it out harmoniously, in an organized way and without losses is the combat mission of both sugar beet growers and their partners in the agroindustrial complex.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

STEPS TO AVOID PAST MISTAKES IN SUGAR BEET HARVESTING TAKEN

Moscow PRAVDA UKRAINY in Russian 2 Mar 83 p 1

/Article: "Sugar Beet Growers Welcome Spring"

/Text/ Makar Anisimovich Posmitnyy, one of the founders of the kolkhoz movement in the country, having heard one day the complaints of his chairman colleagues about weather conditions, uttered the following phrase:

"As far as I am concerned, even if stones fall from the sky, I will get my 40 quintals of grain per hectare."

A sound calculation, the highest standard of farming on the farm headed by him and deep faith in people were behind these words.

Let us glance at the essence of what has been stated more broadly, not only as applied to grain farming. Last year was complicated for all the republic's zones. Many farm managers attribute the low sugar beet harvests to this circumstance. However, the link of Hero of Socialist Labor I. N. Pasechnik from the Kolkhoz imeni 21 S'yezda KPSS in Lipovetskiy Rayon, Vinnitsa Oblast, gathered 512 quintals of sweet roots per hectare. His colleagues from the same area, Hero of Socialist Labor D. I. Vasil'kovskiy from the Kolkhoz imeni Kotovskiy and V. S. Levandovskiy from the Kolkhoz imeni Lenin (both farms are in Yampolskiy Rayon), obtained 563 and 523 quintals of sugar beets per hectare.

A chance? Favorable weather conditions? Not at all. The links of Hero of Socialist Labor I. K. Galaki from the Kolkhoz imeni Kotovskiy in Novomoskovskiy Rayon, Dnepropetrovsk Oblast, of Ye. P. Dekhtyar from the Radyans'ka Ukrayina Kolkhoz in Krasilovskiy Rayon, Khmel'nitskiy Oblast and of V. F. Komar from the Kolkhoz imeni Voroshilov in Mironovskiy Rayon, Kiev Oblast, also exceeded the target of 500 quintals. Cherkassy, Ternopol and other oblasts also have links that have obtained 500 quintals. Their fields are located in various zones both with insufficient and excess moisture. Despite everything the harvests are high.

Let us make the following comparison. The Kolkhoz imeni Lenin in Kazatinskiy Rayon, Vinnitsa Oblast, obtained 563 quintals of sugar roots per hectare on an area of 385 hectares. In the same Vinnitsa Oblast more than one farm, where the yield of the sugar beet hectare was less than 100 quintals, can be mentioned. Unfortunately, some kolkhozes and sovkhoses in other oblasts in the republic were also satisfied with low harvests.

The reasons for this are also known. In the fall scuffling was carried out late, the fall field was not plowed on schedule, technology was grossly violated and little attention was paid to the fertilization of plantations. For example, in Sumy and Rovno Oblasts organic fertilizers were not applied at all on one-fourth of all the sugar beet fields. In Cherkassy and Poltava Oblasts sowing was late, errors in the formation of plant density were made and attention to the protection of crops against pests and diseases was slackened.

As a result, the sugar industry has failed to obtain a significant amount of raw materials. All this places special requirements on the republic's sugar beet growers during this central year of the five-year plan. The following words by Comrade Yu. V. Andropov, general secretary of the CPSU Central Committee, stated at the meeting with Moscow machine tool builders apply to them: "We must finish what, frankly speaking, we have not done during the first 2 years and try to make up for what has been neglected and to create conditions for normal work during the last 2 years of the five-year plan."

It should be noted that in Vinnitsa, Poltava, Kiev and a number of other oblasts with the direct participation of party, Soviet and agricultural bodies last year's miscalculations have been profoundly analyzed and specific measures to avoid them have been mapped out. With due regard for crop rotations our main industrial crop has been placed after the best predecessors. More organic fertilizers than before are applied to it and the preparation of the entire technical arsenal for field work is carried out in a more organized way. The technological adjustment of cultivators and seeders is better than last year and mutual checks on the readiness for the departure to the field are carried out everywhere.

Seed stocks have also been stored in advance. More than 90 percent of the required amount of seeds have already been shipped to farms. Three-fourth of them meet the requirements of the first category of the sowing standard. Almost all seeds have been "dressed" in a protective nutritive jacket, which accelerates germination and protects sprouts against pests and diseases.

In brief, on kolkhozes and sovkhoses a great deal is being done to prevent the repetition of last year's mistakes. A number of practical measures for a more successful realization of the republic Sakhar /Sugar/ overall scientific and technical program have been outlined. The success of this enterprise will now depend to a decisive degree on sugar beet growers and on their skills.

Complicated and responsible tasks have been set for this year. The republic's sugar beet field will occupy more than 1.7 million hectares. As stated in the socialist obligations of the workers of the Ukrainian SSR for 1983, a total of 315 quintals of sweet roots per hectare are to be gathered. The fact that on one-half of the entire sown area sugar beets will be cultivated according to industrial technology is to serve the successful implementation of what has been envisaged. Furthermore, single-germ seeds of promising highly productive regionalized, new varieties are to be sown on more than 1 million hectares. To allocate areas for them in the localities and to see to it that all agrotechnical methods aimed at the attainment of the planned harvest are followed unconditionally--this is the direct duty of farm specialists and managers.

The expansion of the scale of utilization of industrial technology and the higher level of mechanization demand a constant enrichment of knowledge on the part of sugar beet growers. It is gratifying that during the winter 1,000 machine operators improved their skills at the republic seminar held at the Ukrainian SSR Exhibition of USSR National Economic Achievements by the republic's Ministry of Agriculture and the All-Union Scientific Research Institute of Sugar Beets. Similar classes were held in oblasts. Now party and Soviet bodies in the localities and specialists must ensure the entire set of organizational measures, which would contribute to the most efficient use of the acquired knowledge in practice.

Little moisture has accumulated in soil during this winter and one of the top-priority tasks of sugar beet growers is to obtain uniform good sprouts even with these small reserves. Therefore, it is extremely important not to miss a moment of sowing and to see to it that equipment operates with the highest return.

Agronomical services of sugar plants and sugar beet receiving centers can do a great deal in terms of ensuring the envisaged harvests. Unfortunately, for the time being they keep aloof. Therefore, new rayon agroindustrial associations, using their rights and leaning on the support of rayon party committees, must enlist the practical assistance of these services during the period of sowing and care of crops.

The breathing of spring is ever more perceptible and the beginning of work on the sugar beet field is ever closer. To make it as generous as possible means to make a perceptible contribution to the realization of the country's food program.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

TRANSPORT SHORTAGES THREATEN UKRAINIAN SUGAR BEET HARVEST

Moscow SEL'SKAYA ZHIZN' in Russian 21 Aug 83 p 2

[Article by S. Luzgan, SEL'SKAYA ZHIZN' correspondent, Ukrainian SSR: "For More Sugar From Each Hectare Under Sugar Beets!"]

[Text] /Yesterday the decree of the CPSU Central Committee and the USSR Council of Ministers "On Additional measures to Assure the Prompt Harvesting, Procurements and Processing of Sugar Beets From the 1983 Harvest" was published in the press. Today this newspaper reports on the manner in which the Ukraine's sugar beet growers and processing-industry workers commence the peak season on the beet fields, and on what should be done to make sure that the harvesting of the beets, their conveyance to the factories and their processing would be conducted comprehensively and smoothly./[printed in boldface]

As you drive along the village road you see fields that rapidly change in color. You unwittingly think of the approaching autumn, of the coming end of the reaping of grain and the beginning of another harvesting season--this time for sugar beets. Beets occupy a special place on the calendar of the Ukraine's farmers. Their harvesting is more labor-consuming and it falls due in autumn, when fair weather cannot be expected. There is a need for efficient and well-coordinated effort and action of all the participants in the complex conveyor line of sugar-beet production.

In any kolkhoz and sovkhos you are certain to be told that the weight of the average sugar beet is now much greater than, and sometimes even double, its weight in the last 5-10 years. I ascertained this personally the other day while touring sugar beet plantations in the republic's northwestern zone, where a good harvest of this crop is maturing. Fulfilling the long-range republic program "Sugar," the working people of the Ukraine are consistently modernizing this important link in the agro-industrial complex. New single-seed high-yielding varieties and hybrids are planted, the complex whole of agrotechnical methods is being employed more competently, and the technology of the harvesting, storage and transportation of sugar beets is being refined. In the Ukraine there is a growing number of mechanized links and detachments,

of kolkhozes and sovkhoses which each year attain high harvest yields, and of enterprises which attain a high yield of white sugar.

Solid scientific resources are being mobilized for assessing the experience gained. Recently an expanded session was held by the NorthWestern Research Center of the UkSSR Academy of Sciences and the presidium of the scientific coordination council under the Vinnitsa Oblast Ukrainian CP Committee. At that session the discussion dealt with increasing the effectiveness of sugar beet production by utilizing the achievements of scientific and technological progress.

N. V. Pasternak, chairman of the Yampol'skiy RAPO [Rayon Agro-Industrial Association] declared in an interview that the initiators of the drive for maximizing the yield of white sugar per hectare have grown a good harvest this year. In August the weight of the average beet harvested on the rayon's 8,150 hectares under this crop exceeded 350 grams, and the mean density of beets per hectare was 102,000.

Nikolay Vasil'yevich said: "Even now we are achieving a harvest of nearly 400 quintals [per hectare]. Each day more than 6 quintals additionally grow per hectare. Thus, by the time mass harvesting commences, more than one dozen of quintals will be additionally available for harvesting. And we are ready to harvest them all promptly, while the collective of the Gonorovskiy Plant is ready to process them optimally. True, there is one 'bottleneck'--transport."

Both administrators and party workers in other rayons, too, mentioned that the transport possibilities at present may be inadequate. On this subject a talk was also held with L. L. Krivoruchko, first secretary of the Vinnitsa Oblast Ukrainian CP Committee:

Leontiy Leont'yevich declared: "The oblast's beet growers are expected to sell to the state more than 7 million tons of sugar beets. The maturing harvest is quite good: much labor was invested in it and the harvesting equipment is in better condition than in the previous years. The preparation of sugar plants for the new campaign is being completed. They will start operating this year earlier than usual, so they can process more efficiently a large quantity of the raw material. Mass harvesting also will commence earlier. This means that the sugar beets have to be delivered to reception stations as rapidly as possible, and best of all on the day of their harvesting, before they rot and lose weight and sugar content. We do not have enough trucks to cope with the increased volume of beet hauls. Usually, the republic's southern oblasts help us out with additional trucks. This year, too, they will help us. But the trouble is that they promise to dispatch trucks to us as usual in the second half of September, whereas by that time a lot of harvested beets will have accumulated."

On returning to Kiev I sounded out the republic organizations about the transport problem. Yes, I was told, 95,000 trucks are being dispatched from the southern oblasts to the beet-growing zones. but not as early as could be desired.

What does this mean? Last year the trucks arrived in small groups, as a rule toward the end of September, and in smaller numbers than planned. There was a considerable pile-up of sugar beets on the plantations. For this year, too, the arrival of the trucks at their destinations has again been scheduled for a later date than needed--15 September--even though selective harvesting is already starting and the sugar plants are starting to operate. And as for that very same Vinnitsa Oblast, trucks are scheduled to arrive there as late as on 21 September.

The transport problem could be alleviated by organizing additional reception stations so as to increase truck turnover. But the workers of the republic's Ministry of the Food Industry are opposed to this. It may be that the establishment of these stations is inconvenient from the administrative point of view. But is it convenient for the beet-growing farms and the state when, owing to transport shortages, beets are left to lie on the fields and lose weight and sugar content, thus leading to the loss of hundreds of thousands of tons of sugar?

Now both beet growers and sugar producers are, as the saying goes, in the same boat, and the agro-industrial association has to solve this problem from the standpoint of national rather than administrative interests.

Of course, both kolkhoz and sovkhos transport and outside transport should be better utilized. This highly important potential should also be exploited through the united effort of the agro-industrial association. If last year is considered, only a few rayons in which the beet transporting schedule was closely followed can be named. The causes varied but the result was the same: shift quotas were underfulfilled.

Centralized management of motor transport operations should be more broadly introduced. Last year 80 percent of all motor vehicles allocated for carrying sugar beets in various rayons of the Vinnitsa, Poltava, Khmel'nitskiy, Cherkassy and certain other oblasts was assigned directly to farms and the remainder allocated to main rayon harvesting staffs. Such a concentration served to improve the utilization of trucks.

Recently increasing complaints are being made about sugar plants. They are not unfounded: each year hundreds of millions of rubles are spent on the technological modernization of processing enterprises in the Ukraine. Even so, part of the "modernized" plants not only fails to augment the degree of its extraction of sugar from beets but even lowers that indicator. Last year 18 enterprises in Vinnitsa Oblast tolerated excessive losses of sugar in molasses and thus sustained a production shortfall of 4,000 tons of sugar. Substantial losses also are being sustained in other ways.

But to be fair it should be stated that beet growers should share the blame together with sugar-makers. In recent years the use of continuous-flow and continuous-transloading techniques of harvesting has been spreading. But many

beets get damaged owing to violations of technology. Such beets are difficult to store, and they lose sugar. Many mechanizers attribute the damage to flaws in beet harvesting equipment. The well-known beet grower Yemel'yan Parubok agrees that flaws in equipment design are a factor but considers the principal cause to be the poor training of the mechanizers, their inability to adjust the operating modes of beet harvesting combines to terrain relief and weather conditions. This means that engineers-adjusters have to be assigned to large beet harvesting combines.

One other important factor: Since now the weight of both the beets and their top foliage is much greater than in the previous years, this complicates their harvesting on many farms. Hence it is highly important to assure that mechanizers know how to adjust precisely beet-harvesting equipment and loaders. The special re-certification of experts in beet harvesting instituted in the Poltava, Kharkov, Ternopol, Cherkassy and other oblasts deserves approbation.

This year beets are harvested in the Ukraine from an area of 1,727,000 hectares. Plans exist for delivering 50 million standard tons of this raw material for processing to sugar factories. More than 18,000 six-row complexes, 4,100 three-row KST-3A combines, a large number of loaders, and more than 100,000 trucks will appear on the fields during the mass harvesting season. The task posed is to harvest completely all of the republic's beet plantations by October. But coping with this requires utilizing every combine, every loader, and every truck and trailer.

A few years back the beet growers and sugar-makers, and later also truck drivers, of Yampol'skiy Rayon concluded an agreement for mutual collaboration and scored high end-results. For several years in a row they have ever since been obtaining 43-50 quintals of processed sugar per hectare planted with beets. This initiative, which was approved by the CPSU Central Committee, has been widely emulated. Now that the agro-industrial associations have been established, the collaboration of the partners should enter a qualitatively new stage of development. At present, on the eve of the mass beet harvesting season, the partners in the agro-industrial association should overcome the bottlenecks and coordinate their work on the sugar-beet "conveyor line."

...The first to start selective harvesting of beets in the Ukraine were the farms of Kiev Oblast. The smokestacks of the first sugar plants--Luchinskiy, Uzinskiy and Rakitnyanskiy--have begun to emit smoke. In a week hence seven sugar plants in Vinnitsa Oblast will start processing beets, and the mass sugar-making campaign in this republic will commence at the beginning of September. It is highly important to coordinate sugar-making from the very outset with the entire mighty beet "conveyor line," and to streamline its operation so as to avoid any disruptions.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

TRANSPORTATION OF UKRAINIAN GRAIN, BEET HARVEST DISCUSSED

Moscow PRAVDA in Russian 18 Sep 83 p 1

[Article by O. Gusev, PRAVDA correspondent, Ukrainian SSR: "On Autumnal Routes: Safeguarding the Harvest"]

[Text] These days two streams, one of grain and the other of sugar beets, merge into a single mighty river as it were on the motor roads of the Ukraine. Truck drivers of the system of the UkSSR Ministry of Motor Transport alone have delivered about 4 million tons of grains. Now trucks carrying the sweet rootcrop increasingly often travel in groups or in a continuous column. The number of KamAZ tractor-trailer trucks encountered on the roads is particularly large.

A. Artemenko, Deputy UkSSR Minister of Motor Transport, declared: "Such truck-trailer trains assured the successful transportation of the early grain harvest. The Crimean driver I. Dochinets, for example, delivered more than 3,000 tons of grain. High results were achieved by A. Yevdokimenko, P. Mishchenko and A. Petrov of Kiev Oblast. They used only truck-trailer trains in delivering grain to the Fastov grain reception station. By using 18 ZIL truck-trailer trains they accomplished a volume of operations that otherwise could be handled only with the aid of 115 single trucks."

Now that shipments of the beet harvest are under way, the Fastov personnel are likewise using this method. They have repaired in advance truck bodies and raised the height of their sides. At the Kozhanskiy Sugar Plant a truck maintenance station was installed, thus raising the readiness coefficient of trucks to 0.98.

The driver brigades headed by A. Yevdokimenko, P. Mishchenko and A. Petrov have concluded collective contracts with the farms and the sugar plant. The drivers obligated themselves to pick up sugar beets as rapidly as possible and without losses, while the kolkhozes, sovkhozes and the plant obligated themselves to provide the conditions for a smooth operation.

L. Khodakov, first secretary of the Fastov city party committee, said: "The contracts are being implemented. All participants in the harvesting operations are interested in this."

In earlier years about 400 trucks was dispatched to the rayon. Now only 80 trucks are used to pick up sugar beets. Each driver transports from the field to the plant a volume of beets that is greater by a factor of 2.5-3 than in the past.

The well-organized dispatcher service is of great help. The situation on the routes is known at any time. Loading time could be reduced to a minimum. Spare trailers usually are available on the farms. Thus while a truck trailer train carries the next shipment to the sugar plant, the spare trailer on the field is being loaded and towed by means of a tractor to the roadside.

During the first few days of beet harvesting drivers in the Kiev, Khmel'nitskiy and Cherkassy oblasts achieved high indicators of performance. Some of them have already delivered a total of 2,000 to 3,000 tons of beets each, and driver V. Levitskiy of Kagarlykskiy Rayon has delivered a total of nearly 4,000 tons in his KamAZ truck-trailer train with its two trailers.

The pace could be higher. But the roads are not in good condition everywhere. For some reason, repair of particularly traffic-laden segments of the Kozhanka-Yakhny-Dmitrovska roads has begun during the peak of harvest-transporting operations. Functionaries of the "Gosavtoinspektsiya" [State Motor Vehicle Inspectorate] do not always act in close cooperation with road maintenance personnel. This concerns the operative deployment or removal of speed signs. On the Kiev-Khar'kov-Donetsk route, not far from the settlement of Valki, for example, the posted maximum speed on a recently asphalted road segment is 30 kilometers. Yet a little farther on, where the road is worse, the roadsign permits a maximum speed of 60 kilometers.

As shown by inspection tours performed by people's controllers, some segments of access roads to beet reception stations are still in poor condition in the Vinnitsa and Zaporozhye oblasts. Drivers have major grievances against the road-building organizations in the Volchanskiy and Novovodolazhskiy rayons of Kharkov Oblast. There are many potholes on the roads of Dnepropetrovsk Oblast, especially in the region of Pavlograd. Incontestably, the UkSSR Ministry of the Construction and Maintenance of Motor Highways and the republic Gosavtoinspektsiya should be more demanding in this respect.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

KIEV OBLAST BEGINS SUGAR BEET HARVESTING

Moscow SEL'SKAYA ZHIZN' in Russian 24 Aug 83 p 1

[TASS communique: "Concerns of Sugar Beet Growers"]

[Text] KIEV, 23 [Aug 83] (TASS). The sugar beet campaign on the beet plantations of the Ukraine was opened by Kiev Oblast, one of the leading beet growing oblasts, where selective digging of beets was commenced. Today truck drivers have delivered the first shipments of the raw material from the new harvest to processing enterprises.

Guiding themselves by the decree of the CPSU Central Committee and the USSR Council of Ministers "On Additional Measures to Assure the Prompt Harvesting, Procurements and Processing of Sugar Beets From the 1983 Harvest," farmers strive to conduct all operations comprehensively and smoothly, on utilizing the grain-reaping experience. As the TASS correspondent was informed at the oblast agricultural administration, 240 combined-skills teams of equipment operators have been set up for this purpose.

Plans exist for a broad use of progressive continuous-flow and continuous-transloading methods, along with hourly trucking schedules. Currently final preparations for mass harvesting are under way on the farms: the loosening of the soil, the removal of weeds and special treatment of the crop against diseases. Following the example of twice Heroes of Socialist Labor S. Vishtak and O. Diptan, Hero of Socialist Labor A. Kosyachenko and other masters, at present not just individual subdivisions but dozens of farms in the oblast strive to attain a harvest of 500 quintals per hectare.

The beet growers of Kiev Oblast expect to complete the harvesting of beets by 24 October and their transportation, by 31 October.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

PREPARATIONS FOR POTATO HARVEST IN BELORUSSIA

Moscow SEL'SKAYA ZHIZN' in Russian 4 Aug 83 p 1

[Article by V. Legan'kov, 'SEL'SKAYA ZHIZN' correspondent, Belorussian SSR: "While the Tuber is Ripening: Belorussian Rural Toilers Conduct Field Work and Prepare for the Potato Harvest"]

[Text] The potato crop is ripening in Belorussia and the first new potatoes have appeared in the stores. Treatment with pesticides and herbicides is proceeding full steam ahead on the principal fields planted with the late-maturing varieties.

V. V. Tvarovskiy, link leader at the "Novaya zhizn'" Kolkhoz in Nesvizhskiy Rayon, Minsk Oblast, said: "The Colorado beetle and the phytophthora could damage the crop. We are taking steps to prevent this."

V. V. Tvarovskiy's link, which is now working for the second year under the collective contract system, has pledged itself to dig up 260 quintals of the tubers from each of the 69 hectares assigned to it. The direct interest of the potato growers in optimal end-results and their industriousness, competence and the use of advanced agricultural equipment all enable them to grow such a harvest.

The potato growers of Nesvizhskiy Rayon fulfilled the plan for the first 2 years of the 5-Year Plan and now have the potential for digging up 235 quintals of the tubers per hectare from the 2,700 hectares they cultivate and delivering at least 15,000 tons of potatoes compared with the plan target of 13,400 tons. N. A. Zhuk, chairman of the RAPO [Rayon Agro-Industrial Association Council] singles out the elimination of the notorious lack of personal responsibility for field work among the factors that have contributed to the smooth course of the operations, along with the uniting of the efforts of all the partners in farming operations on precisely this sector. All the potato plantations have been assigned to 43 permanent mechanized final-production links of which 31 operate under the collective contract system.

True, not all aspects of the application of the collective contract system have yet been clarified. The principle of direct material interest in

reducing expenditures and production cost has not yet been applied to every cost-accounting task.

Clearly, RAPO councils have yet to do a great deal of work on improving the economic relations between the kolkhozes and sovkhoses and their partners, especially considering that the contribution of these partners to the overall result can be quite considerable. For example, there is the "Sel'khozkhimiya" [All-Union Association for Agricultural Chemicals], which bears full responsibility for treating potato fields against diseases and pests. It has set up 12 links and assigned each link one or two farms. Their operations are personally directed by crop-protection agronomists. Following reports from observer posts and by agreement with the agronomic services of the farms, the "Sel'khozkhimiya" at present is completing comprehensive treatment of the late-maturing varieties. The early- and midseason-maturing varieties have been treated twice and, where needed, thrice against the potato beetle and the phytophthora. In this connections, rationalizers have converted to stanchion spraying nearly one-half of the fan-type sprayers used.

While the crop is maturing on the fields, the RAPO's technical service is repairing the harvesting equipment. The rayon association of the "Sel'khoz-tekhnika" All-Union Agricultural Equipment Association is providing the farms with the needed components and spare parts and has performed in its shops the overhauls of combine harvesters at cost, without any surcharges.

The situation in Nesvizhskiy Rayon, which lies in the hinterland, is extremely typical of the entire Belorussia. At present, for the first time, about a thousand mechanized brigades and more than a thousand mechanized links work under the collective contract system. They grow potatoes on 186,000 hectares or 51 percent of the socialized potato-growing land (in Brest Oblast, 75 percent).

Nearly everywhere, with the exception of certain farms in the Poles'ye Region which have been affected by drought and summer frosts on peat fields, crops are maturing normally and even 1.5 to 2 weeks ahead of the customary season, which enhances the opportunities for growing a higher harvest of potatoes of better quality. This republic has a real opportunity for fulfilling the socialist pledges for the 3rd year of the 5-year plan: harvesting 180 quintals of potatoes per hectare and selling nearly 2 million tons of potatoes to the state. This task is all the more responsible considering that in the previous 2 years Belorussian kolkhozes and sovkhoses provided the country with 587,000 fewer tons of potatoes than targeted, chiefly owing to last year's poor crop. This shortfall can be compensated for only through an organized conduct of the final field operations and prompt and competent preparations for harvesting the potato crop.

As never before, the Belorussian "Belsel'khozkhimiya", which is fully responsible for chemical field treatment in this republic, is providing effective assistance to farmers. Its subdivisions have treated more than three times as many potato fields as they did last year.

But as for the "Sel'khoztekhnika," farms are complaining about it. Through the fault of its repair personnel, a large part of combine harvesters stands idle during the peak of the grain-harvesting season and the supply services do not provide adequate amounts of certain spare parts to the farms. Will the same thing happen when it is time to dig up potatoes? The proportion of fully functioning combine harvesters is particularly low in the southern oblasts--Gomel, Brest and Grodno, and yet there is every sign that this year the mass potato harvesting season will begin not in September as usual but already during the 3rd decade of August, so that there is little time left for final preparations.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

EXPEDITING POTATO HARVEST IN BELORUSSIA

Minsk SEL'SKAYA GAZETA in Russian 20 Aug 83 p 2

[Article by A. Il'yasevich, chief, potato department, Belorussian SSR Ministry of Agriculture, A. Kruglyakov, director, BelNIKPO [expansion unknown], and N. Kandaurov, director of laboratory at the TsNIIMESKh [Central Scientific Research Institute of Rural Mechanization and Electrification of the Non-Chernozem Zone of the USSR]: "Focus Attention on the Potato Harvest" under the rubric "To the Notice of Farmers"; passages enclosed in slantlines printed in boldface in the original source]

[Text] The current weather conditions have accelerated the evolution of the stages of growth and development of all potato varieties. Tuber-formation has begun much earlier than in the preceding years. Hence also it is expected that tuber growth will cease earlier as well. This is also due by the shortage of moisture in the soil owing to the prolonged absence of rainfall and the higher air temperatures. Hence the main task at present is to take all the necessary steps to assure a rapid and competent harvesting of potatoes as well as to preserve the entire harvest.

/IN VIEW OF THE MORE RAPID PHYSIOLOGICAL MATURING OF THE TUBERS, EVEN NOW THE HARVESTING OF EARLY, EARLY-MIDDLE AND MIDDLE-MATURING POTATO VARIETIES SHOULD BE COMMENCED EVERYWHERE, SINCE IN PRACTICE THERE CAN BE NO FURTHER INCREASE IN THEIR HARVEST./ So far as this year's conditions for the republic as a whole are concerned, potato-digging should be completed by 25 October-1 September.

Of major importance to the prompt and competent conduct of this work is a suitable preparation of the material-technical base along with thoroughly planned schedules of operations reflecting progressive forms of the organization and remuneration of labor and effective socialist competition. The potato-harvesting and sorting machinery should be staffed with highly skilled operators and assistants throughout the harvesting season. Prior to the commencement of mass harvesting, all kolkhozes and sovkhoses should complete the repair and preparation of all potato-harvesting equipment and its field trials.

/THOROUGHLY PREPARED AND ADJUSTED POTATO HARVESTING MACHINERY WILL ASSURE HARVESTING TUBERS OF THE REQUIRED PURITY AT MINIMUM LOSS AND DAMAGE. PRIOR TO THE COMMENCEMENT OF HARVESTING THE RUNNING GEAR OF THE HARVESTERS SHOULD BE ADJUSTED TO FOUR-WHEEL DRIVE. BLADES SHOULD BE ADJUSTED TO THE PROPER DIGGING DEPTH SO AS TO AVOID SHEARING TUBERS AND OVERLOADING THE SEPARATING ORGANS WITH AN EXCESSIVE WEIGHT OF SOIL. TO REDUCE TUBER LOSSES, IT IS NECESSARY TO TIGHTEN THE JOINTS OF ELEVATOR SIDES, CLOD COMPACTORS AND THE WINCH DRUM AS WELL AS TO STRAIGHTEN OR REPLACE BENT OR BROKEN RODS IN THE ELEVATOR CANVAS./

To alleviate the operating conditions of harvesting machinery and expedite the maturing of tubers, the following pre-harvest operations should be conducted: As part of general sowing work, top foliage should be mowed 5 or 6 days before harvesting--and on seed potato fields, 12-14 days before harvesting. Good results are produced by chemical destruction of top foliage conducted 12-14 days prior to harvesting, by spraying the fields with a 3-5 percent solution of magnesium chlorate. If there is a shortage of this chemical, it is advisable to apply an half-strength solution upon first conducting mechanical removal of the top foliage. The desiccation of the top foliage destroys the spores of the phythophtora in the foliage as well as in the soil.

The top foliage can also be used as fodder. It is silaged together with green corn and other crops. But in every individual case it should be analyzed at a veterinary toxicological monitoring laboratory. Following the removal of top foliage on soils of moderate and difficult mechanical composition, the inter-row areas in sectors with "smeared-out" furrows should be loosened to a depth of 12-14 cm with the aid of KON-2.8 and KRN-4.2 cultivators having arrow-shaped teeth. This disrupts the root system of the plants, dries the soil better and improves separation as well as the performance of the machinery.

/THE AVAILABILITY OF EQUIPMENT MAKES IT POSSIBLE TO CONDUCT POTATO HARVESTING BY MEANS OF POTATO-HARVESTING COMBINES ALONE./ Hence, potato diggers should be used only slightly contoured fields as well as dissected terrain and sectors markedly infested with stones.

/ON HIGH-MOISTURE (24-26 PERCENT) SOIL AND GIVEN A TUBER YIELD OF UP TO 200 QUINTALS PER HECTARE ON MEDIUM AND DIFFICULT SOILS, POTATOES ARE HARVESTED BY THE SEPARATION METHOD. THIS IS DONE WITH THE AID OF AN UKV-2 DIGGER-WINDROW LAYER ACROSS FOUR OR SIX ROWS WHICH ARE ARRANGED INTO A WINDROW ON THE FIELD SURFACE AND PICKED UP BY MEANS OF A COMBINE EQUIPPED WITH AN ACTIVE BLADE. ON SOILS OF LIGHT AND MEDIUM MECHANICAL COMPOSITION THAT SEPARATE WELL, THE COMBINED METHOD OF HARVESTING IS USED IN ORDER TO INCREASE COMBINE PRODUCTIVITY. IN THIS CASE, THE TUBERS ARE DUG OUT BY THE WINDROW-LAYER FROM TWO OR FOUR ROWS AT A TIME AND PLACED IN THE INTER-ROW AREAS OF ADJACENT SECTORS WHICH ARE SUBSEQUENTLY HARVESTED BY MEANS OF THE COMBINE. THE COMBINED METHOD OF HARVESTING SERVES TO INCREASE COMBINE PRODUCTIVITY BY A FACTOR OF 1.5-2./

In recent years the Ye-684 triple-row digger-loader has become widely used in the republic: compared with the harvesting combine, its productivity is higher by a factor of 1.7 and susceptibility to damage lower by 30 percent. It is expedient to use this machine on light and medium well-separating soils with

prior loosening of inter-row areas. On difficult soils with a high moisture content, the KTN-2B and KST-1.4 potato diggers should be used. The design of the KST-1.4 digger provides for varying the intensity of soil separation depending on the conditions of harvesting.

/THE HARVESTING OF 'THE SECOND BREAD' [POTATOES] THIS YEAR SHOULD BE CONDUCTED EVERYWHERE BY COMBINED-SKILLS TEAMS OF OPERATORS SET UP FOR COMPREHENSIVE UTILIZATION OF EQUIPMENT TO CARRY OUT THE COMPLETE TECHNOLOGICAL CYCLE./ The advantages of such an organization of labor are confirmed by the operating experience of potato growers in the Ivanovskiy, Dobrushskiy, Shchuchinskiy, Volkovysskiy, Nesvizhskiy, Kletskiy, Volozhinskiy, Bobruyskiy and various other rayons where harvesting is completed within 17-20 calendar days.

/THE HARVESTING AND TRANSPORT TEAMS SHOULD INCLUDE LINKS FOR CONDUCTING THE FOLLOWING OPERATIONS: PREPARATION OF FIELDS FOR HARVESTING; HARVESTING AND TRANSPORTATION; POST-HARVESTING TREATMENT OF POTATOES; STORAGE OF POTATOES; REPLowing OF POTATO FIELDS, TECHNICAL MAINTENANCE, AND CONSUMER SERVICES. IT SHOULD BE MANDATORY FOR THE HARVESTING AND TRANSPORT TEAMS TO INCLUDE LEADERS AND MEMBERS OF MECHANIZED LINKS FOR POTATO CULTIVATION OPERATING UNDER THE COLLECTIVE CONTRACT SYSTEM./

Everything should be done to introduce progressive techniques for organizing harvesting operations on the basis of longer work time. This includes organizing two-shift operation, delivering hot meals to field workers, increasing net work time per shift, unloading while in motion, rational division of sectors into subsectors, refueling directly on the field, complementing the crew with two tractor and combine operators, prior harvesting of the tubers from crop-rotation belts, and uninterrupted operation of machinery throughout the work day.

To reduce stoppages of harvesting equipment owing to breakdowns and operating defects, maintenance service should be efficiently organized. To this end, every farm should operate mobile and stationary repair links and a stockpile of the needed equipment, components and spare parts. All rayon associations of the "Sel'khoztekhnika" [Agricultural Equipment Association] should organize round-the-clock operation of their shops, equipment replacement stations, dispatcher service, and supply facilities, and they should set up stocks of the needed components and units.

Harvesting should be coupled with determining the attendant losses and organizing the replowing of potato fields by means of potato diggers or cultivators in two directions: along and across. It should become a rule for every kolkhoz and sovkhoz that the lands subjected to replowing with subsequent pick-up of tubers are to be regarded as harvested lands.

/THE QUALITY OF SEED MATERIAL LARGELY DETERMINES NEXT YEAR'S HARVEST LEVEL./ Hence, along with harvesting, special attention should be devoted to setting up seed stockpiles. Long-term statistics accumulated by the BelNIKPO and the experience of the leading farms of the republic convincingly demonstrate that stable annual potato harvests can be achieved only if each farm grows three or

four varieties of potatoes with vegetation seasons of varying length. Such a selection of varieties assures the most efficient utilization of the precipitation that occurs during various vegetation periods of the potato.

In view of all these circumstances, precisely now it is necessary to assure planting for seed purposes of tubers of an early or early-middle or middle-maturing variety along with tubers of one or two late-maturing varieties, in the amount of 5.5 tons per hectare of planned planting area.

/THE POTATO VARIETIES REGIONIZED IN THIS REPUBLIC ASSURE A PROPER SELECTION OF VARIETIES FOR EACH ZONE. THUS, THE FOLLOWING ARE REGIONIZED HERE WITHIN THE FIRST-NAMED GROUP: "BELORUSSIAN EARLY," "VOROTYNSKIY EARLY," "PRIGOZHIY-2," "ADRETTA," "NOVINKA," "DETSKO-SEL'SKIY, AND "VYATKA"; WITHIN THE SECOND GROUP: "OGONEK"; AND WITHIN THE THIRD GROUP, "LOSHITSKIY," "SADKO," "*TEMP," "KOMSOMOLETS-20," AND "ZUBRENOK."/

/IN ADDITION, THE REPUBLIC'S FARMS GROWING MOTHER STOCK SEEDS WILL THIS YEAR TRANSMIT TO THE KOLKHOZES AND SOVKHOZES MORE THAN 35,000 TONS OF THESE SEEDS, WHICH SHOULD BE ALLOCATED SO AS TO TAKE INTO ACCOUNT THE NEED TO PROVIDE KOLKHOZES AND SOVKHOZES WITH THREE OR FOUR VARIETIES DIFFERING IN THEIR MATURING SEASONS./

The mother stock seeds purchased in 1983 should be used to plant first year's offspring in seed nurseries. It should be borne in mind that, in accordance with the intra-farm seed growing system adopted in this republic, kolkhozes and sovkhoses should maintain nurseries for first- and second-year offspring as well as seed sectors. These should be harvested first, and in good weather at that.

/SPECIFIC MEASURES SHOULD BE TAKEN TO ASSURE THAT THE SEED STOCKS FOR THE 1984 HARVEST INCLUDE TUBERS OF NOT BELOW THE FIFTH REPRODUCTION, THAT ALL PLANTINGS OF MULTIPLY REPRODUCED REGIONIZED AND PROMISING VARIETIES BE PRESERVED AND THAT MOTHER STOCK BE USED FOR SEEDS ONLY./

During the harvesting, transportation and storage of seed potatoes special attention should be paid to preventing the commingling of seed varieties and generations.

The attendant high temperatures create favorable conditions for the development of bacterial diseases. In addition, the earlier harvesting of potatoes affects adversely their preservability. /TO ASSURE PRESERVING THE ENTIRE HARVEST, SPECIAL ATTENTION SHOULD BE PAID TO THE DRYING, VENTILATION AND SPROUTING OF SEED TUBERS, AS WELL AS TO THE COMPLETE FILLING OF ALL AVAILABLE POTATO STORAGE BINS AND EQUIPPING THEM WITH ACTIVE AND INTAKE-EXHAUST VENTILATION SYSTEM AND PROVIDING EVERY CONDITION FOR PRECLUDING THE SPOILAGE OF POTATOES./ This year every step should be taken to store seed potato stocks only in storage bins and actively ventilated regular pits. The ventilation should be turned on chiefly at night or in the daytime in the presence of lower temperatures. In addition, the proper storage of the potatoes remaining on the farms for use as food and fodder should be attended to. For

better preservation and to assure the ripening of their skins, the harvested potatoes should first be kept for 2 or 3 weeks in temporary pits, whereupon they should be carefully sorted and stored in relatively small pits (accommodating 15-20 tons).

/THE DIFFERENCE BETWEEN ACTUAL CROP YIELD AND BIOLOGICAL YIELD SHOULD SERVE AS THE BASIS FOR DETERMINING THE WAGES OF THE HARVESTING EQUIPMENT OPERATORS./

/EXTRA PAY SHOULD BE GRANTED FOR A HIGHLY SKILLED ON-SCHEDULE AND LOSS-FREE CONDUCT OF OPERATIONS. THE RECOMMENDED AMOUNTS OF EXTRA PAY FOR HARVESTING POTATOES SHOULD BE GRANTED IF THE CONDUCT OF OPERATIONS IS RATED 'EXCELLENT.' WHEN THE WEATHER IS POOR, FARM MANAGERS MAY, IN CONSULTATION WITH TRADE-UNION ORGANIZATIONS, FIX PROVISIONAL OUTPUT QUOTAS FOR HARVESTING POTATOES ON ESPECIALLY COMPLEX SECTORS./

/FOR EVERY HOUR OF NIGHT-TIME WORK, UNDER THE PIECEWORK WAGE SYSTEM, THE WORKER RECEIVES EXTRA PAY AMOUNTING TO ONE-SEVENTH OF HIS WAGE CATEGORY IN EXCESS OF HIS PIECEWORK WAGE RATE. NIGHT-TIME WORK IS CONSIDERED TO BE WORK FROM 2200 HOURS AT NIGHT TILL 0600 HOURS IN THE MORNING./

Operative monitoring of the prompt and competent conduct of the harvesting of potatoes and their transfer to seed stockpiles, sales to the state and shipment to the all-Union stockpile should be handled by the heads of production sectors or brigade leaders in cooperation with the agronomic services of the kolkhozes and sovkhozes.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

ATTENTION FOCUSED ON BELORUSSIAN POTATO HARVEST

Minsk SEL'SKAYA GAZETA in Russian 6 Sep 83 p 1

[Unsigned article: "Focus All Attention on Potato Harvest and Procurements!"]

[Text] This year potatoes will have to be harvested from an area of 360,700 hectares in this republic. According to operative statistics of the Belorussian SSR Ministry of Agriculture, 1,577 kolkhozes and sovkhozes in this republic have started harvesting potatoes--this is 65 percent of the total number of farms. The largest proportions of farms active in this harvesting are in Gomel Oblast (95.5 percent) and Minsk Oblast (87 percent). In the Mogilev and Vitebsk oblasts this indicator does not exceed 13-19 percent.

Currently 1,315 combines--or 12 percent of all such existing equipment, work on the republic's potato fields. The output per harvesting equipment unit is only 1.9 hectares. In Mogilev Oblast this output is 1.7 hectares; in Brest Oblast, 1.8 hectares; and in Gomel Oblast, 2 hectares.

/THE MOST IMPORTANT CURRENT TASK IS TO START OPERATING THE PERTINENT EQUIPMENT EVERYWHERE AND STRIVE TO USE IT AS PRODUCTIVELY AS POSSIBLE AS WELL AS TO ATTAIN A HIGH QUALITY OF HARVESTING OPERATIONS. ALONG WITH THE HARVESTING OF THE TUBERS IT IS NECESSARY TO SET ASIDE SEED STOCKPILES AND SPEED UP THE PACE OF POTATO SALES TO THE STATE./[printed in boldface]

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MAJOR CROP PROGRESS AND WEATHER REPORTING

POTATO HARVEST PROGRESS IN BELORUSSIA

Moscow SEL'SKAYA ZHIZN' in Russian 17 Sep 83 p 1

[Article by V. Legan'kov, 'SEL'SKAYA ZHIZN'' correspondent, Belorussian SSR: "The Belorussian Potato"]

[Excerpts] Many farms in Belorussia at present have grown higher potato harvests than in the previous years: about 200 quintals are harvested per hectare on the average, and the leading kolkhozes and sovkhoses harvest as many as 300 quintals per hectare.

The "harvest conveyor" is operating efficiently in Luninetskiy Rayon, Brest Oblast, where the local farmers are gratified with the results of their work...

K. Sumar, chairman of the Luninetskiy Rayon RAPO [Rayon Agricultural Association] Council, said: "People are working as hard as they can. The restructuring of management of the agro-industrial complex, the conversion to the collective contract system and the improvements in discipline are producing their effects. All the services are geared to work for agriculture. The rayon's plan of potato sales to the state is 17,600 tons, but it intends to actually sell about 27,000 tons of select-grade potatoes and thus also make up for the shortfall of the last 2 years.

Instances of this kind could be multiplied throughout Belorussia. In the same Brest Oblast, the potato crop has already been harvested on one-third of all potato fields during the first decade of September not only in the Luninetskiy Rayon but also in the Lyakhovichskiy, Ivanovskiy, Gantsevichskiy and Zhabinkovskiy rayons. In Minsk Oblast the potato growers of the Nesvizhskiy, Letskiy and Kopyl'skiy rayons have made the greatest progress. The first in that oblast to report completion of the harvest was the Kolkhoz imeni Chkalov, Soligorskii Rayon. The pacesetting crews under Hero of Socialist Labor S. Dubovskiy and V. Matveyev have dug up 2,500 tons of the tuber each during the season. With its yield of 270 quintals of potatoes per hectare, this kolkhoz has exceeded by a factor of more than 1.5 its plan for potato sales to the state. An ardent competition has developed between the nationally famous links headed by Hero of Socialist Labor O. Kazachka at the "Lyubanskaya" Experimental Base and by I. Sinitskiy, who was awarded three different degrees

of the Order of Labor Glory, at the "Zagal'skiy" Sovkhoz in Lyubanskiy Rayon. They harvest 400 quintals of potatoes per hectare each on their fields and have already dug up 2,500 tons with their Ye-684 potato diggers.

More than 360,000 hectares are planted with potatoes in the kolkhozes and sovkhozes of this republic. The annual growth rate of the potato harvest is 4-5 percent in many places. Harvesting is done with the aid of students and "patrons" from cities and settlements. Trucks carrying the new harvest are hastening toward the railroad stations. The plan for potato procurements in this republic amounts to nearly 2 million tons. The farms strive to fulfill it with honor.

A special concern is to provide potatoes to the all-Union stockpile of 585,700 tons of food potatoes and 130,000 tons of varietal seed potatoes. Priority is given to dispatching trainloads of potatoes to Moscow, Leningrad and regions of the Far North. The procurement personnel has provided extensive facilities for transloading the potato harvest. A total of 113 train stations has been equipped with 128 transloading facilities, some of which have been modernized and expanded this summer. To avert stoppages of motor transport while awaiting the arrival of freight trains, 177 mechanized bunkers have been built to store potatoes at train stations. About 1,000 trucks deriving from motorized columns, the "Sel'khoztekhnika and other organizations and enterprises have been mobilized for centralized pick-up. At most railroad stations their stoppages have been reduced to a minimum. The operations are organized on a round-the-clock basis. Train dispatching schedules are being followed. More than 100,000 tons of potatoes have already been dispatched to the all-Union stockpile.

Even so, the pace of harvesting and procurements could be more rapid. Delays in providing rolling stock are an obstacle, and in some rayons fuel for motor vehicles has become a problem. The harvesting schedule and the "peak" season of hauls have been put forward a couple of weeks, but the funds allotted for gasoline are being utilized according to the old schedule composed as far back as in the beginning of the year. The possibility of accelerating gasoline deliveries should be explored. This will speed up the pace of harvesting.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

INDUSTRIAL TECHNOLOGY FOR SUNFLOWER PRODUCTION IN NORTH OSETIAN ASSR

Krasnodar SEL'SKIYE ZORI in Russian No 1, Jan 83 p 21

/Article by B. Basayev and T. Dzobelov, candidates of economic sciences and assistant professors at the Gorkiy Agricultural Institute/

/Excerpts/ Sunflowers are one of the principal oil-bearing crops cultivated at kolkhozes and sovkhoses in the North Osetian ASSR. The favorable soil-climatic conditions found in this autonomous republic promote the development of high and stable yields of oil-bearing seed. Occupying from 7 to 11 percent of the area under crops (in excess of 6,000 hectares), sunflowers provide the farms with 10-20 percent of their income from field crop husbandry.

During the 1976-1980 period, the expenditures for seed, fertilizers, irrigation and mechanization equipment for the cultivation of sunflowers increased considerably. On the whole, 12.5 percent more funds were spent per hectare during this period compared to 1975. And the yield of products per unit of space increased by 19.6 percent.

As a result of growth in the average yield for sunflower seed, the production cost per quintal of output decreased by 6 percent (from 10 to 9.41 rubles) and direct labor expenditures -- by 37.5 percent. As the production cost decreased, the production profitability rose to 140.8 percent. This signifies that 1.41 rubles of profit were obtained per ruble of expenditure. During more favorable years, the economic indicators for sunflower production are considerably higher.

The kolkhozes and sovkhoses in the North Osetian ASSR have considerable reserves at their disposal for further raising the economic efficiency of sunflower production. And here we should point out first of all the need for intensifying specialization and concentration in the production of oil-bearing seed.

The cultivation of sunflowers on irrigated land is extremely effective. In 1979 the per hectare yield for sunflowers grown under irrigation conditions in the republic was 14.1 /and for the entire area used for this crop -- only 10.6 quintals per hectare/.

Despite the above fact, less than 20 percent of the sunflower sowings at kolkhozes and sovkhoses in the North Osetian ASSR are on irrigated land.

In order to increase sunflower production, the industrial technology must be introduced into operations on a more extensive scale. The plans call for the industrial sunflower plantations to be increased to 6,000 hectares by 1985, compared to only 2,000 hectares in 1982. The average annual gross yields of oil-bearing seed during the 11th and 12th Five-Year Plans will increase from 6,200 to 10,000 tons and the yields -- from 9.6 to 14-16 quintals.

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MEASURES FOR CONTROLLING SPREAD OF BLACK SPOT DISEASE IN SUNFLOWERS

Moscow ZASHCHITA RASTENIY in Russian No 3, Mar 83 p 21

/Article by Ya.P. Brayko, chief of the Moldavian Quarantine Inspection and N.N. Raylyan, head of a laboratory: "Black Spot Disease in Sunflowers"/

/Text/ Black spot disease in sunflowers (embelliziya) was recorded only recently in our country. The causative agent infects all of the above-ground parts of the plants. Dark brown spots which are lighter along the edges and which take various forms appear on the leaves, stalks and heads. Initially these spots are small and later they increase in size up to 2-3 centimeters in diameter. On the stalks they appear as dashes and imperfect ellipses 1-5 centimeters in size. On the calyx lobes the spots are brownish-black and at times concentric in shape; they are elliptically shaped on the petals, initially small and brown in color and subsequently merging with the color of the petals. The leaves and stalks are most vulnerable between the stages of milky and waxy ripeness.

In 1981, specialists attached to the plant quarantine service carried out a controlled inspection of Moldavian sunflower fields that has been sown using imported seed. A large number of specimens were delivered to the republic's quarantine laboratory for analysis. Seed having a changed coloring and a coating was selected for analysis. The specific affiliation of the fungus was determined under a microscope. In the absence of specific signs of the infection, a test-tube was half filled with damaged seed and plant impurities and thereafter some healthy grains were added. The test-tube was processed in a centrifuge and subsequently the sediment was examined under a microscope.

As a result, the causative agent of black spot in sunflowers was uncovered on four farms. The degree of infection turned out to be negligible -- 10-15 diseased plants per hectare. The fact that correct procedures were employed in defining the disease was confirmed by the Department of Identification and Arbitrary Analysis of VNITIKiZR.

Specialists attached to the inspection are monitoring the situation in a strict manner to ensure that the causative agent does not appear in domestic seed. The sunflower crop harvested at farms where the disease was noted was processed into oil at the Atakskiy Oil Extraction Plant (MEZ), with the oil cake being used for feeding to the livestock. The republic's northern regions

obtain their seed from the seed production zone (southern regions) and it is free of the infection.

During the first quarter of 1982, seed from 26 rayons throughout the republic was analyzed. Special attention was given to the seed obtained from seed production farms in five southern rayons (Vulkaneshtskiy, Kagulskiy, Tarakliyskiy, Chadyr-Lungskiy and Komratskiy), which specialize in the cultivation of seed for simple hybrids. The causative agent of embelliziya was not detected. Of the non-quarantine diseases, grey mould, alternaria blight and fusarial wilt were detected. Prior to sowing the sunflower seed was treated with a water suspension of 80 s.p. TMTD /tetramethylthiuram disulfide/ (2-3 kilograms per ton). During the growing season the specialists attached to the republic inspection and laboratory and rayon quarantine inspectors inspected the sunflower sowings and selected suspicious specimens for laboratory analysis. Defoliation has been carried out in all areas for the purpose of preventing the spread of moulds and for protecting the crop already cultivated. The causative agent of the disease was not observed in the republic in 1982.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

OVERVIEW OF 1983 SUNFLOWER HARVEST OPERATIONS

Moscow PRAVDA in Russian 29 Sep 83 p 1

/Article by S. Vladimirov: "Gifts of the Sunflower"/

/Text/ By the end of September, the crops had been harvested from many of the fields. The winter crops -- next year's grain -- were spread out in the form of a delicate green velvet cover. But the machine operators were still somewhat uneasy. Many products still remained to be shipped off to the country's granaries.

The grain harvest is nearing completion. The grain growers in the eastern regions are harvesting their grain from the last and most difficult hectares. The equipment is not being removed from the forage crop plantations. During the last week alone, the silage supplies increased by 28.6 million tons. The harvesting of vegetables and fruit is continuing. According to data supplied by the USSR TsSU /Central Statistical Administration/, by 26 September potatoes had been harvested from 2.5 million hectares. This work is being carried out at a high tempo in Bryansk and Moscow Oblasts -- the largest producers of the "secondary grain."

The harvesting of technical crops is in full swing out on the plantations. Sweet roots are being received and processed by hundreds of sugar plants. The beets have been harvested from 1.8 million hectares. In a number of areas the shipping of the products is being held up by irregular transport operations and by a lack of coordination between the farmers and the food industry workers. Here some influence must be exerted by the agroindustrial associations, who exercise control over the entire harvesting production line.

The RAPO's /rayon agroindustrial association/ in the cotton growing republics are undergoing a serious examination at the present time. The white harvest requires efficient interaction by the farmers and procurement specialists. The agroindustrial associations can accomplish a great deal towards raising the quality of the raw cotton and increasing the yield of fibre. Greater concern must be displayed for the harvesting rates.

The chief oil-bearing crop -- sunflowers -- has been harvested from two thirds of the areas. This year it was planted on 4.3 million hectares. Some time ago the farmers in a number of regions reduced the amount of attention they

were giving to sunflowers. At the present time, measures have been undertaken aimed at raising the yields for this crop. The sowing was carried out using better quality seed. One half of the sowings consist of early and rapid ripening varieties. High yield hybrids have been sown on roughly one tenth of the areas. One out of every four sunflower hectares is being cultivated using an industrial technology.

A decision is being made today as to how great will be the return from resources expended. The farms prepared approximately 80,000 combines for the harvest work, one half of which are equipped with the new PSP-1.5 attachments. The farmers are striving to ensure a production line for threshing the heads and also to reduce losses to a minimum. Importance is being attached to maintaining a high quality in the raw materials used for obtaining food oil.

The kolkhozes and sovkhoses in Moldavia carried out their harvest work in an efficient and organized manner. Thus the results were indeed high. An average of 25-27 quintals of oil-bearing seed was obtained in Glodyanskiy, Drokiyevskiy and Yedinetskiy Rayons. An even higher yield was obtained at the Kolkhoz imeni Kotovskiy in Vinnitsa Oblast. Here each hectare furnished 33.8 quintals of sunflowers.

Almost one half million tons of oil-bearing seed were delivered to receiving points in the Kuban. The sunflower crop was very generous in Leningrad, Timashevskiy, Ust-Labinskiy and Kavkazskiy Rayons. The crop was harvested and shipped to the granary earlier than usual.

The development of advanced agricultural practices and the introduction of hybrids made it possible to reduce the risk of damage to the plants by diseases. However, the danger of such damage was not eliminated entirely. Thus, within the complex of harvesting operations to be carried out, an important role must be played by cultivation of those sowings which accelerate the ripening of the heads. This method is being employed successfully by many farms. But it is being neglected at a number of kolkhozes and sovkhoses. This applies in particular to Voronezh Oblast and the Bashkir ASSR.

Specialists attached to the USSR Minsel'khoz Ministry of Agriculture are of the opinion that the majority of farms are capable of carrying out their sunflower harvesting work in just 5-6 days. At the Belgorod Rassvet Kolkhoz, in Prokhladnenskiy Rayon in the Kabardino-Balkarsk ASSR and in many rayons in Odessa Oblast, success was achieved in completing the work within just such a time frame. Moreover, in addition to threshing the seed, they also succeeded in cleaning the seed in advance on the threshing floors before shipping it to the procurement specialists. Naturally, the leading workers have no secrets. Everything is dependent upon skilful and well thought out organization of the work.

But there are problems of another type. Quite often the harvest work is dragged out for 30-40 days in Penza, Kuybyshev and certain other oblasts. Such delays can be explained on the basis of organizational disorder alone. For example, the farms in Tambov Oblast have at their disposal almost 2,000 combines, all of which are equipped with production attachments for removing the heads. Last week, notwithstanding the fact that the weather was dry, the output per hectare here did not exceed 1.3 quintals -- considerably less than the norm.

The farmers in Rostov Oblast are also open to criticism. The work volumes here are great. Sunflowers are grown on 404,000 hectares. Yet the rates for threshing the heads are the lowest in the north Caucasus. Many combine operators are not coping with their shift tasks. Meanwhile, the period of bad autumn weather is approaching and this raises the threat of losses.

According to data supplied by the All-Union Scientific-Research Institute of Oil-Bearing Crops, a delay of just 3 days in carrying out the threshing work in the Volga region can result in a shortfall in yield of 1.1 percent. A delay of 15 days -- losses amounting to 29.5 percent of the crop grown. Thus it is difficult to understand why the field crop growers in certain regions have still not commenced their mass harvesting work. This work is proceeding very slowly on fields in Kazakhstan and the Altay Kray.

The agroindustrial associations must exercise control over the threshing as well as the procurement and processing of the seed. Incidents are being encountered of the products being left outdoors at the grain receiving enterprises. This amounts to deliberate losses of oil. It is important for all partners to join in the competition to obtain high final results. The experience accumulated in collaboration between the field crop growers and workers attached to processing enterprises, all of whom accept joint responsibility for obtaining the finished oil, must be disseminated on a more extensive scale.

Autumn is making its presence known in a more persistent manner. Fine days are at a premium. The farmers must hasten in their efforts to harvest and preserve all of the riches being offered up by the fields.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

NEW SUGAR BEET VARIETY--This spring on the sugar beet field of Ternopol Oblast (it occupies 118,000 hectares) did not resemble previous springs. The experience of farms in Podvolochisskiy Rayon was popularized further. There it was not only possible to develop an industrial technology of production of raw materials for the sugar industry eliminating manual labor, but also to demonstrate that detachments of machine operators on full cost accounting, which also include technologists, could grow programmed harvests. As stated at the June (1983) Plenum of the CPSU Central Committee, this makes it possible to utilize the production and scientific and technical potential of the sector most sensibly and to overcome the lag rapidly. In the oblast this year sugar beets are cultivated according to industrial technology on 46,800 hectares. About 500 series seeders improved with colters for the embedding of one-germ seeds at a specified density have been reequipped, which has eliminated manual thinning. A total of 18,500 hectares are occupied with the new veselopodolyanskiy-29 variety with an increased sugar content. The enterprises of the Agricultural Equipment Association have set up the manufacture of devices making it possible to do without a manual removal of tops from roots. /Excerpt/ /Moscow IZVESTIYA in Russian 30 Jun 83 p 1/ 11,439

NEW CULTIVATION TECHNOLOGY--The efficient technology of cultivation of seed plants of sugar beets without transplants proposed by Ukrainian scientists has come out from experimental plots to production tracts. Today specialized farms in Crimean and Odessa Oblasts have begun to dispatch the seeds gathered from such plantations for further processing. For example, on the Beregovoy Sovkhoz the harvest of seeds per hectare reaches 25 quintals. The development of the new technology is envisaged by the Sakhar /Sugar/ overall scientific and technical program implemented in the republic. The climatic conditions of southern regions make it possible to establish nurseries in the summer and not to dig out root crops for the winter. At the same time, labor expenditures are reduced to one-third and the seed production cycle, by a whole year. /Text/ /Vilnius SOVETSKAYA LITVA in Russian 6 Aug 83 p 1/ 11,439

DIGGING OF BEET ROOTS--Kiev, 23 Aug (TASS)--The harvesting campaign on the sugar beet plantations of the Ukraine has been opened by one of the leading sugar beet planting oblasts--Kiev Oblast--where a selective digging of roots has begun. Today motor vehicle drivers have delivered the first batches of raw materials of the new harvest to processing enterprises. Sugar beet growers in Kiev Oblast plan to conclude the digging of roots on 24 October and their carting, before 31 October. /Excerpts/ /Moscow SEL'SKAYA ZHIZN' in Russian 24 Aug 83 p 1/ 11,439

MEETING ON BEET PRODUCTION--Vinnitsa, 6 Aug (RATAU)--A significant gain in the sugar beet harvest and an increase in finished output per hectare of plantations in the republic are to be obtained through the introduction of scientific achievements. Some of them already give a practical return; for example, the yubileynny hybrid developed by the breeders of the Sakhsvekla Scientific Production Association. In accordance with the republic Sakhar goal-oriented scientific and technical program the new hybrid has been regionalized in eight oblasts. Next year the areas under it will be expanded, exceeding $\frac{1}{2}$ million hectares. The yubileynny variety, along with a high productivity, has a good germinative capacity. It is a one-seed variety, which makes it possible to widely utilize the industrial technology of cultivation of this crop. Several promising varieties and hybrids are to be introduced in the republic by the end of the five-year plan. The potentials for an increase in the efficiency of sugar beet production on the basis of scientific and technical progress were discussed at a 2-day expanded meeting of the council of the North-Western Scientific Center of the Ukrainian SSR Academy of Sciences and of the scientific coordinating council at the Vinnitsa Oblast Party Committee that has ended today. Scientists from the Sakhsvekla Scientific Production Association, the Sakhar Scientific Production Association and institutes of the Ukrainian SSR Academy of Sciences, party, Soviet and economic workers from oblasts in the republic's north-western region and specialists from a number of farms participated in the meeting. They became acquainted with the results of selection work of the Uladovo-Lyulinetskaya Experimental Selection Station and with the experience in labor cooperation of sugar beet growers and sugar refiners in Yampolskiy Rayon. The adopted recommendations envisage a set of measures for strain renovation and improvement in the machine technology of cultivation and processing of sugar beets. L. L. Krivoruchko, first secretary of the Vinnitsa Oblast Party Committee, spoke at the meeting. [Text] /Kiev PRAVDA UKRAINY in Russian 7 Aug 83 p 37 11,439

POTATO HARVESTING DELAYS CRITICIZED--The potato harvesting equipment existing in this republic should enable the farms to harvest potatoes from 18,000-20,000 hectares daily. At such a pace of operation the harvesting of the "second bread" should take not more than 20 days. Actually, however, 11,000-12,000 hectares are being harvested daily in this republic. Although 2 weeks have already elapsed since the mass harvesting of potatoes began, less than half of the area planted with potatoes has so far been harvested. [Text] [Minsk SEL'SKAYA ZHIZN' in Russian 15 Sep 83 p 1] 1386

MOGILEV, VITEBSK OBLASTS' POTATO HARVESTING--The potato growers in the Mogilev and Vitebsk oblasts are slow to join in the harvesting drive. Few hectares under potatoes have been harvested so far in the Goret'skiy and Mstislav'skiy rayons. This "second bread" is also being slowly harvested on farms in the Baranovich'skiy, Vetkov'skiy, Il'yev'skiy and Ostrovetskiy rayons. [Text] [Minsk SEL'SKAYA GAZETA in Russian 11 Sep 83 p 11] 1386

KURSK BEET HARVEST--Kursk, 23 September--Beet growers in the oblast have sold their first million tons of sugar beets to the state. They bring more than 100,000 tons of beets to receiving points every day. Farms in Oktyabr'skiy Rayon have fulfilled two-thirds of the plan for procuring raw materials for the sugar industry. The kolkhozes and sovkhozes of Sovetskiy, Kurchatov'skiy, and a number of other rayons are also transporting sugar beets at a fast rate. [by A. Trubnikov] [Excerpt] [Moscow SEL'SKAYA ZHIZN' in Russian 24 Sep 83 p 1] 12424

KAZAN BEET HARVEST--Mass harvesting of sugar beets has begun at farms in Tataria. In order to improve the efficiency of work of the combines, machine operators with the help of specialized cultivators conducted pre-harvest loosening of the soil. Farmers in Buinskiy Rayon who fulfill norms by 1.5 times daily set the tone in competition. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 16 Sep 83 p 1] 12424

PENZA BEET HARVEST--A large batch of sugar from beets of the new harvest was produced at processing plants in the oblast. This year the sugar refining season began a week earlier than usual. Both farmers and processors are rejoicing over the harvest: the weight of incoming beets is up to 500 grams. The by-products of production -- beet pulp-- are being used efficiently also. The first shipments of this valuable supplement for livestock have arrived at stock farms. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 9 Sep 83 p 1] 12424

TENDING SUNFLOWER CROP--Kiev, 14 Jun--One of the country's largest sunflower plantations (more than 1.5 million hectares) is in the Ukraine. All-round mechanized detachments, many of which have converted over to the group contract method, are now engaged in carrying out their second treatment of the crops. The group use of equipment is making it possible to carry out the work on an abbreviated schedule basis. The farmers are introducing new technologies which will ensure optimum conditions for the development of the plants. For example, on many farms in Odessa and Zaporozhye Oblasts the seed is placed in the soil using 8-row sowing machines. This now makes it possible to employ caterpillar tractors with wide-swath cultivators for tending the crops. The productivity of such units is twice as high as that for conventional machines. In addition, they do not pack the soil down as much. The collectives of leading farms and processing enterprises throughout the republic are jointly campaigning to obtain a yield of not less than 1 ton of oil per hectare. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 15 Jun 83 p 1/ 7026

SUNFLOWER HARVEST PREPARATIONS--Thorough preparations have been made in Kherson Oblast for harvesting an important technical crop. Towards this end, approximately 1,200 grain combines were re-equipped. Labor organization for the machine operators is based upon use of the group contract method. In order to accelerate and "smooth out" the drying out of the heads and thus improve their threshing, a special operation is being carried out over considerable areas -- treating the crops with special chemical substances. /by P. Buchel'/ /Excerpt/ /Kiev PRAVDA UKRAINY in Russian 12 Jun 83 p 1/ 7026

LARGEST SUNFLOWER PLANTATION--The country's largest sunflower plantation -- more than 1.5 million hectares -- is in the Ukraine. The collectives of all-round mechanized detachments, many of which have converted over to the brigade contract method, are presently carefully tending the sowings of this crop. The group use of equipment is making it possible to carry out the work on an abbreviated schedule basis. The farmers have selected a technology which ensures optimum conditions for the development of the plants. On many farms in Odessa and Zaporozhye Oblasts, for example, the sunflower seed has been placed in the soil using 8-row sowing machines. This is making it possible to use caterpillar tractors with wide-swath cultivators out on the fields. The productivity of such units is twice as high as that of conventional machines. In addition, they do not pack the soil down quite so much. Cracks do not form

on a well loosened surface, there is less moisture evaporation and rain water is absorbed better and "works" more reliably in behalf of the crop. The plantations in Kirovograd and Kharkov Oblasts have been cultivated very well. The machine operators here have already carried out the second loosening of the inter-row spacings on one half of the tracts. In maintaining their sunflowers free of weeds, similar to other row crops, the farms are receiving assistance from their patrons -- workers from industrial enterprises, office workers from rayon and municipal institutes and organizations, pensioners, housewives and senior students. The second mass cultivation of the sowings of this oil-bearing crop is now unfolding throughout the entire republic. /by T. Arkushenko/ /Text/ /Kiev PRAVDA UKRAINY in Russian 12 Jun 83 p 1/ 7026

UKRAINIAN SUNFLOWER HARVEST--Kiev--Yesterday the farms in the Ukraine commenced their mass harvesting of sunflowers. Approximately 20,000 combines equipped with special attachments were moved out onto the fields. This will make it possible not only to accelerate the work tempo but also to reduce losses considerably. /Text/ /Moscow TRUD in Russian 11 Sep 83 p 1/ 7026

SALES PLAN FULFILLED--Zaporozhye, 3 Oct--The Zaporozhye sunflower field is the largest in the Ukraine: it occupies approximately 200,000 hectares. At the present time, the harvest work is nearing completion on this field. This year has turned out to be an unfavorable one for this oil-bearing crop and the rural machine operators are striving to harvest the entire crop without losses. The collective at the Mokryanka Sovkhoz has successfully fulfilled its plan for selling oil-bearing seed to the state. More than 20 quintals have been obtained from each hectare here. An even greater yield -- 23-24 quintals -- was obtained at the Druzhba Sovkhoz. And at the Petromikhaylovskiy Sovkhoz the yield is reaching 25-27 quintals. This represents more than a ton of oil per hectare. /by N. Ivanchenko/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 4 Oct 83 p 1/ 7026

KRASNODAR KRAY SUNFLOWER YIELDS--Each year sunflowers are grown on 8.2 percent of the arable land at our kolkhozes and sovkhozes. It would seem that it should not be too difficult to maintain a correct crop rotation plan and to observe a pause in the cultivation of this crop on the same field of not less than 8-10 years. However, a considerable amount of effort must be expended in order to be able to follow this requirement in a firm manner. Compared to the 9th Five-Year Plan when the average sunflower yield for Timashevskiy Rayon was 23.1 quintals of seed per hectare, during the 10th -- 24.3 and the average for 2 years of the 11th Five-Year Plan -- 26.2, including 29.4 quintals in 1982. Last year the gross yield of seed increased by 3,330 tons compared to the average annual yield during the 9th Five-Year Plan. This represented an increase of 12 percent. During this period the sale of seed to the state increased by 3,478 tons -- or by almost 20 percent. It is apparent that the sunflower crop possesses great potential. But only true masters of farming are taking proper advantage of this potential. We recall the advice of our remarkable fellow country-man Academician V.S. Pustovoyt and we will always strive to follow it. /by V. Samoylov, chairman of the council for the Timashevskiy Rayon Agroindustrial Association in Krasnodar Kray/ /Excerpts/ /Krasnodar SEL'SKIYE ZORI in Russian No 9, Sep 83 pp 14-16/ [COPYRIGHT: "Selskiye zori", 1983] 7026

SUNFLOWER HARVEST COMPLETED--Krasnodar-- The harvesting of sunflowers has been completed in the Kuban region. An average of almost 20 quintals of oil-bearing

seed has been obtained from each hectare and at leading farms -- up to 30 or more quintals. /Text/ /Moscow TRUD in Russian 1 Oct 83 p 1/ 7026

UNSATISFACTORY SUNFLOWER PRODUCTION--In the all-union division of labor, our republic occupies an important place in the production of oil-bearing seed and especially simple hybrids for both itself and other regions of the country. Over a period of many years now, the leader in obtaining high sunflower yields has been Glodyanskiy Rayon, which last year obtained 28 quintals. Roughly 22.7-23.9 quintals of oil-bearing seed were obtained in Lazovskiy and Drokiyevskiy Rayons. Even higher indicators have been achieved by individual farms. Despite all this however, the status of affairs in the production of oil-bearing seed remains unsatisfactory. This is borne out by the fact that over a period of a number of years the republic has not fulfilled its plans for the production and procurement of this valuable crop. As a result of insufficient sowing and low planning and technological discipline, the farms in Nisporenskiy, Bessarabskiy, Kotovski, Tarakliyskiy, Chimishliyskiy, Grigoriopol'skiy and Novoanenskiy Rayons did not fulfill their plans for producing and selling oil-bearing seed to the state. /Excerpt/ /Kishinev SEL'SKOYE KHOZYAYSTVO MOLDAVII in Russian No 1, Jan 83 pp 2-3/ [COPYRIGHT: Izdatel'stvo TsK KP Moldavii. "Sel'skoye khozyaystvo Moldavii", 1983/ 7026

SUNFLOWER SEED PROCESSING--Kishinev--The Moldraszhirmasloprom Association has commenced processing sunflower seed from the new crop. The shipping of finished products began yesterday. Prior to the end of the year, the association will have processed in excess of 50,000 tons of vegetable oil. /Text/ /Moscow TRUD in Russian 2 Sep 83 p 1/ 7026

HYBRID SUNFLOWER SEED--Kishinev, 22 Oct--This year the field workers in Drokiyevskiy and Glodyanskiy Rayons have developed a fine crop of sunflowers: they obtained 27.9-29.2 quintals of oil-bearing seed from each of 6,500 hectares. And farmers at the Moldova Sochialiste Kolkhoz in Drokiyevskiy Rayon obtained 36 quintals. This result became possible through the use of simple hybrids, used in place of such earlier regionalized sunflower varieties as Odesskiy-63 and VNIIMK-1646. The new arrivals are distinguished by a higher productivity and rapid ripening, factors which are very important for mechanized harvesting since they reduce crop losses sharply. At the present time, a large specialized zone is being created in the southern part of the republic for the production of hybrid sunflower seed. Last year the initial hundreds of quintals of seed were obtained from hybridization tracts in Komratskiy, Chadyr-Lungskiy and Vulkaneshtskiy Rayons. And this year more than 3,500 tons of such seed have been produced. The processing of the seed is being carried out at a rapid tempo. Next year the hybrid seed will be made available to all farms in Moldavia and also to many rayons in the Ukraine and the Russian Federation. /by N. Marfin/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 23 Oct 83 p 2/ 7026

TAMBOV BEET HARVEST--Having for the most part completed the harvesting of grain, farmers in the Tambov region have begun to harvest sugar beets. This year 117,000 hectares were planted in sugar beets. According to estimates of specialists, the yield will be higher than last year. The processing base was well prepared to receive the crop and an additional 10 receiving points were opened. [by V. Kolobov] [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 30 Aug 83 p 1] 12424

KIEV BEET HARVEST--The harvesting season is picking up speed at the beet plantations in the Ukraine, which are the largest in the country. Farms in all oblasts of the republic are already working. They have harvested 160,000 hectares of beets. The long-range "Sugar" program which is being implemented in the republic determines the rhythm of the field-to-plant production chain and coordination of partners' actions throughout the agroindustrial complex. Ukrainian beet growers have applied a great deal of effort to raising the harvest. In collaboration with transport workers they plan to deliver 50 million tons of sugar beets for processing. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 8 Sep 83 p 1] 12424

UKRAINE SUGAR BEET HARVEST BEGINS--The harvesting season on the Ukraine's sugar beet fields was started by a leading sugar beet oblast--Kiev Oblast, where selective digging of the beets has commenced. Yesterday truck drivers delivered the first shipments of the raw material from the new harvest to processing enterprises. The farmers of Kiev Oblast strive to conduct all operations comprehensively and smoothly, utilizing the grain-reaping experience. For the current season 240 combined-skills teams of equipment operators have been organized. Most of the harvesting combines placed at their disposal are six-row KS-6 and RKS-6 ones. The teams were provided with loaders and means of transport adapted to the capacity of these combines. Enterprises of the UkSSR Ministry of Motor Transport and the "Sel-khoztekhnika" Agricultural Equipment Association as well as industrial enterprises of the republic's capital city will provide considerable assistance in transporting the sugar beets. [Text] [Kiev PRAVDA UKRAINY in Russian 25 Aug 83 p 1] 1386

UKRAINE BEET HARVESTING ACCELERATES--Kiev. Harvesting operations on the Ukrainian sugar beet plantation, the largest in the country, are gaining momentum. Farms in all the oblasts of the republic already have commended these operations. Beets have been harvested on 160,000 hectares. The smooth operation of the "conveyor line" leading from the field to the factory and the coordinated action of the partners in the agroindustrial complex follow the long-range targeted "Sugar" Program being implemented in this republic. Ukrainian sugar beet growers have exerted considerable effort to grow this harvest. In cooperation with transport personnel, they plan to provide 50 million tons of this raw material to sugar factories for processing. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 8 Sep 83 p 1] 1386

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LIVESTOCK

PROBLEMS, TASKS OF CATTLE REPRODUCTION IN RSFSR DISCUSSED

Moscow SEL'SKOYE KHOZYAYSTVO ROSSII in Russian No 10, Oct 83 pp 2-3

/Article by G. Ogryzkin, RSFSR Deputy Minister of Agriculture: "The Better the Herd -- the Higher the Productivity"/

/Text/ To increase the milk yield per cow and to raise the average daily weight increases and the delivery weight conditions for cattle -- such are the principal tasks confronting the livestock breeders of Russia today. In order to solve these tasks, it is necessary not only to strengthen the feed base but also to implement improvements in the productive qualities of the animals and in the reproduction of the herd and also to improve the safeguarding of the young stock.

From year to year many kolkhozes and sovkhoses are achieving high indicators in the use of the brood stock. In 1982, almost 4,000 farms obtained 90 calves from every 100 cows and 500 farms -- 100 or more.

At the same time, in critically evaluating the work associated with reproduction of the herd it must be confessed that by no means have all of the necessary measures been taken. Last year, eight percent of the farms obtained less than 60 calves per 100 cows. In particular, the kolkhozes and sovkhoses in the Tuva and Kalmyk ASSR's and in Smolensk, Tambov, Rostov, Chita and Ryazan Oblasts are carrying out very unsatisfactory work with their brood cattle stock.

Nor can a situation in which many kolkhozes and sovkhoses carry out their principal culling out of brood stock during the first quarter of the year be considered normal. Many cows are being delivered during this period on farms in Kurgan, Magadan, Kalinin, Kaliningrad and Sakhalin Oblasts, in the Kabardino-Balkarsk ASSR and in Khabarovsk Kray. And indeed the holding over of cows until the end of the year for the sake of an imagined improvement in their condition causes harm to the work: feed is consumed in an inefficient manner and unproductive use is made of both labor resources and facilities.

Many farms lose offspring owing to crude violations of the cattle maintenance procedures and a shortage of maternity departments and veterinary dispensaries. In Amur and Chita Oblasts, for example, 18 percent of the calves were lost owing to these factors and in Irkutsk Oblast and the Altay Kray -- 17 percent.

Shortcomings in the area of veterinary services are causing harm to herd reproduction operations. Many farms lack sanitary areas, isolation wards and disinfection enclosures.

Gosplemobs' yedineniye elements are not carrying out the artificial insemination of the animals in the required volumes and the kolkhozes and sovkhoses, counting upon their assistance, are quite often failing to devote serious attention to this work.

Concern is being aroused over the status of affairs with regard to the raising of replacement young stock. Today this is the number one problem. If not solved, no substantial increase can be expected in the dairy productivity of the cows. Meanwhile, the growth and development of the replacement young stock on many farms is lagging considerably behind the standard for a strain and also behind the normative indicators for a particular zone. As a result, the average age for the first calving is higher than the optimum age by 4-5 months and this serves to increase the period of unproductive use of the animals by 12-15 percent.

As a result of the poor development of replacement young stock at the kolkhozes and sovkhoses, 30 percent of the heifers more than 2 years of age remain non-inseminated and on farms in the Dagestan and Kabardino-Balkar ASSR's and in Primorskiy Kray -- more than 60 percent.

It is for this same reason that the proportion of cows in the cattle herd has fallen to 35 percent. Cows constitute less than 30 percent of the herd in Kurgan Oblast and 33-34 percent -- in Kursk, Volgograd and Kuybyshev Oblasts. Meanwhile, the proportion of cows in a herd in suburban zones of the republic must be no lower than 60-65 percent.

Specialized farms are providing only weak assistance in solving the problem concerned with replacement young stock. By no means has a stable feed base been created at all of the specialized farms, the average daily weight increases for heifers remain low and the numbers being raised are negligible.

In order to correct the situation, the structure of the area under crops must be re-examined once again at the specialized farms, the farms must be released from having to fulfill the planned obligations for supplying the state with products which are not related to their principal production activity and greater demands and responsibilities must be imposed upon the farm leaders and specialists. At the same time, work must be completed this year on the creation of specialized farms for the raising of replacement young stock at kolkhozes and sovkhoses.

In solving the problems under discussion, serious attention must be given to improving the organization of labor and production administration. One progressive method for raising the efficiency of animal husbandry operations is that of separate-group maintenance of the cattle, with their physiological condition and productivity being taken into account. In dairy cattle husbandry, the new technology is referred to as a flow line-departmental system for milk production. It is based upon intra-farm specialization and departmental organization of labor. Prior to the beginning of 1983, this technology was employed by almost 4,000 farms having 2.5 million cows.

The advantages of the technology are well known. The farms which employ it obtain 300-400 more kilograms in their milk yields and 3-4 percent more calves. But this system produces positive results only in those instances where its introduction into operations is preceded by thorough preparations -- the selection and training of personnel, creation of a strong feed base and livestock maintenance conditions which conform to their physiological state.

During the next few years it will be necessary to raise considerably the productivity of pedigree animals and expand the network of breeding farms in a number of zones, especially in the Urals and Siberia. The importance of this task is emphasized by the fact that the rates for improving the strains being bred, through the use of highly valuable bulls, are entirely and completely dependent upon the availability of a good breeding base.

Serious attention is being given to the work of the breeding farms in a number of oblasts, krays and autonomous republics. In Leningrad Oblast, for example, solutions have been found for all practical purposes for those problems associated with the organizational-economic strengthening of the breeding farms. Their production activity is directed towards solving the principal task -- the raising and sale of pedigree young stock. The farming branch is concerned with ensuring that animal husbandry is supplied with rich feed.

The workers in Leningrad Oblast achieved a fine solution for the problem of managing these farms. All of the leading plants are combined into one specialized administration, which is directly subordinate to the oblast agricultural organs. At the present time, in addition to completely satisfying the oblast's requirements for pedigree animals, the breeding farms are also selling high quality pedigree products to all regions of the country.

As a result of the successful carrying out of a plan for breeding measures, a highly productive herd of black-variegated cattle has been created at the Petrovskiy Sovkhoz. In 1982, an average of 6,360 kilograms of milk was obtained from each of 1,040 cows here. The fat content was 3.8 percent. And milkmaids L. Baburina and A. Petrova obtained an average of 7,345 kilograms of milk per cow from an enlarged group (54 head).

The best bulls were used on the farm, the daughters of which are obtaining 5,400-5,700 kilograms during the first lactation. As a result of purposeful breeding work, the breeding plant succeeded in creating a number of families having a large number and high genetic value. The best cows in a number of the families furnished more than 300 kilograms of milk fat during lactation. For example, over a period of 330 days of its sixth lactation, an Ebba cow produced 10,169 kilograms of milk having a fat content of 3.63 percent.

The breeding farms have exerted a great influence with regard to improving the oblast's commodity herds.

The breeding plants and breeding sovkhozes in Moscow, Sverdlovsk, Chelyabinsk and Kirov Oblasts completed their operations last year with fine results. They increased their milk yields by 200-250 kilograms and obtained an average of 3,500-4,800 kilograms of milk per cow.

However the work of many breeding farms can by no means be viewed as being satisfactory.

Based upon the results for 1982, the productivity of cows at breeding plants throughout the republic was only 3,662 kilograms and at breeding farms in Kaliningrad Oblast -- 2,701, Maritime Kray -- 1,488 and Yaroslavl Oblast -- 2,344 kilograms.

For example, let us take the Breeding Plant imeni XVII Parts"yezda in Orel Oblast -- a farm having a comparatively good cow productivity, high grain and forage crop yields and a stable collective of livestock breeders and specialists. The sovkhos has a good supply of equipment, each year it uses more than 1 million rubles worth of capital investments and it is building many housing units. However the productivity of the cows has remained at practically the same level over the past 5 years. In 1982 it amounted to 3,870 kilograms.

The work of the breeding farms must be subordinated to solving the principal tasks -- improving the strains of the agricultural animals being bred and raising and selling valuable pedigree young stock. These problems will be solved -- milk and meat will be available. In addition, considerably more pedigree animals will be raised for the purpose of adding to the commodity herds and industrial complexes. The initiative displayed in solving these problems is entirely and completely dependent upon the local agricultural organs.

Unfortunately, such initiative is by no means being displayed in all areas. It is by no means an accident that over the past few years many breeding farms have for all practical purposes forfeited their mission. In 1953, at the Krasnyy Oktyabr' State Breeding Plant in Yaroslavl Oblast (it breeds the Yaroslavl strain of cattle), an average yield of 4,649 kilograms of milk was obtained per cow and in 1982 -- only 1,715 kilograms. The Sychevka State Breeding Plant in Smolensk Oblast, during the course of breeding the Sychevka strain of cattle over the past 15 years, has been transformed into a farm having an average cattle productivity.

It is known that the foundation for breeding work is the selection and intensive use of valuable bulls. This is the foundation for successful breeding work, for the selection of bulls over the course of one generation produces the same breeding effect as does a very strict selection of cows over a period of six generations. Thus the raising and checking of bulls in all areas for their productivity and the quality of their offspring and the use for reproduction purposes of the more valuable bulls is considered to be a vital task.

During the 1970's, with the development of the deep freezing technology for the semen of bulls, considerably greater attention began to be given to the work of evaluating bulls. Over the past 5 years, 11,500 bulls have been checked and evaluated. In the storehouses of breeding enterprises there are 134 million dosages of semen from checked bulls and 34.5 million dosages from evaluated bulls, of which amount 12 million dosages are from improvement bulls. Unfortunately, satisfactory work is not being carried out in the

oblasts, krays and autonomous republics in the evaluation of bulls. In 1982, only 37 percent of the cows and heifers were inseminated using the semen of evaluated bulls, including semen from improvement bulls -- 16 percent.

Many state breeding associations have been criticized for their unsatisfactory work in increasing the individual milk yields of mature and promising cows and adding bulls to the cow groups. This work is important and if neglected there may not be bulls available for improving the herd.

Instead of organizing this work on site, many oblasts, krays and autonomous republics import bulls on the side and at times these animals are of unplanned lines and of low quality. At the same time, poor use is being made of the semen of evaluated bulls, available in the oblasts.

More than 30 strains of cattle are presently being bred in the Russian Federation. The following strains are being employed most extensively: Simental'skaya (32 percent), black-variegated (22), Krasnaya Stepnaya (14), Kholmogorskaya (6.4), Shvitskaya (5.5) and Bestuzhevskaya (5). They constitute 85 percent of the overall number of pedigree cattle.

The domestic strains of cattle are distinguished by high milk productivity, strong constitutions and good meat qualities. On the best farms the milk yields exceed 5,000 kilograms and the yields of champions -- 10,000-12,000 kilograms of milk during a lactation.

However, not all of the strains meet the requirements for the intensive carrying out of animal husbandry operations or for an industrial technology.

Towards this end, work has been carried out for a period of more than 20 years aimed at improving our domestic cattle. On farms in the RSFSR, cattle of the Anglersk, Ayrshir, Shvitskaya, Gollandskaya and Holstein-Friesian strains have been imported. As a result of their use, the productivity of 1st generation hybrids is being raised by 10-20 percent, with the shape and properties of the udder being improved noticeably.

However, despite the positive results, the work concerned with improving the productive and technological qualities of the domestic strains is still proceeding slowly. The imported cattle are being utilized in an unsatisfactory manner in a number of areas. Optimum maintenance conditions are not being created for these animals in all areas and very few pedigree young stock are being raised by means of reproduction.

The state breeding associations and the agricultural organs in the various areas must restore order in the use of imported cattle. Such animals can be culled out only with the permission of the State Breeding Service and bulls -- only following an examination of materials at Rosplemob"yedineniye.

There is still one other concern. Many state breeding associations are making very poor use of the available supplies of semen obtained from bulls of highly productive imported strains. For example, in the storehouses of breeding enterprises in Moscow Oblast there are approximately 1 million dosages of semen from Black-variegated and Holstein-Friesian bulls, the cows of which have

a productivity of 8,745 kilograms of milk with a fat content of 4.23 percent. But in 1984 this semen was used for inseminating only 24,200 cows and heifers.

One important problem is that of ensuring efficient use of the strains. In recent years the diversity of these strains has started to restrain the development of breeding and animal husbandry operations. Yes and how is it possible to organize the breeding of animals intelligently and achieve success in breeding work when 12 dairy strains are being employed in Rostov Oblast and nine in Tula and Kirov Oblasts? It would be more correct if each oblast, kray or autonomous republic bred just one, or at the most, two strains.

The above generally describes the problems associated with improving the herd for our farms. In the final analysis, successful work throughout the entire animal husbandry branch is dependent upon efficient and interesting solutions being found for these problems.

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LIVESTOCK

PROBLEMS OF HOGBREEDING IN INDUSTRIAL COMPLEXES

Moscow SVINOVOdstvo in Russian No 10, Oct 83 pp 4-7

[Article, under the rubric "The Food Program is Everyone's Affair", written by A. Deryabin, chief of the USSR Main Administration of Livestock Production on an Industrial Basis [Glavzhivprom] and candidate of economic sciences: "Under Conditions of Industrial Technology"]

[Text] Increases in pork production during the present five-year plan, in accordance with decisions taken by both party and government, are to be effected by an intense development of the sector: expansion of production capabilities on industrial hog enterprises; transformation of sovkhoz sub-units onto an industrial basis; introduction of highly productive new breeds and species and the breeding of hybrids that meet the demands of industrial technology; a guaranteed feed supply for all categories of hog farms.

At the present time there are several hundred hog complexes in the country, and last year they supplied the state 1,240.6 thousand tons of pork (live weight).

Complexes and farms with industrial technology are responsible for 50-90 percent of all locally produced pork in the following areas: UkSSR, ArSSR, Komi ASSR, Khabarovsk Kray, Vladimir, Kostroma, Belgorod, Tambov, Chelyabinsk, Kemerovo, Novosibirsk, Gorkiy, Omsk, Chita and other oblasts.

The 1982 average daily weight gain on complexes during the breeding and fattening processes was 438 grams, 113 grams more than on other state farms, and the outlays per centner of weight gain were 6.2 centners of feed units and 8.3 man-hours. The cost per centner of weight gain was R60 cheaper.

The profit on hog complexes will permit the capital funds used for construction to be replenished with two-three years.

Even higher indices for animal productivity are reached on state complexes for breeding and fattening that have 54,000 and 108,000 hogs a year. Herds from individual sows have a 35 percent higher intensity use, while the productivity of hogs being bred and fattened is 74 percent higher. Some 3.1 centners of feed units, 20.5 man-hours and R50 of productive expenses are saved on each centner of weight gained.

It is the technology that brings about the efficiency in industrial enterprises; it ensures rhythm and continuity of production, combined handling of animals of a similar age group, the mechanization of all productive enterprises and the optimal microclimate in facilities. This latter ensures an intensive use of the animals' biological peculiarities, a high return on feed, good growth and reduced fattening periods.

It is only because of the introduction of industrial technology that hog complexes in 1982, in comparison to the indices for kolkhozes and sovkhozes sub-units, were able to attain an additional weight gain (live weight) of 430,000 tons for similar herds, a savings of about 3 million tons of feed units and 22 million man-hours. These complexes showed a profit of R345 million from the production of pork.

One opinion holds that if average hog farms only had enough concentrated feed, then they would reach high levels of efficiency in hog production. But that's not really so. Apart from feed, it is high-quality production technology that ensures good weight gains. Where traditional methods of hog raising are practiced, it is difficult to get good results. As an example, the Krasnoye Znamya Pedigree Farm of Penza Oblast and the Pissarëvshchina State Pedigree Farm of Mogilev Oblast both have enough concentrated feed; 9 centners of feed concentrate units yield 1 centner of weight gain, and the average daily weight gain is 304 and 232 grams respectively.

Our country's hog breeding sector has an entire series of standardized projects : complexes for raising and fattening 108,000, 54,000 and 12,000 hogs per year; a hybrid center for the production of 18,100 hogs per year for the replacement herd; and pedigree breeding farms for the larger complexes. There are also projects for mechanized farms with industrial technology for 6,000-9,000 animals. Standardized projects are also being worked out for 108,000 and 54,000 animals per year based on the model for 27,000 head. This means that complexes of various sizes will be able to use the same technical equipment, to bring facilities into operation one at a time, to greatly reduce construction time and to reduce the time necessary to reach productive capacity.

The UkSSR Scientific-Research Institute for Agriculture on an Industrial Basis has worked out a standardized project for 12,000- and 24,000-head complexes (802-01-1, 802-01-02) which will introduce industrial technology into kolkhozes and sovkhozes. On these complexes the hogs will be given concentrated green and succulent feeds and also food wastes; standardized equipment will be used.

All of this will allow hog production operations on farms everywhere to be run on an industrial basis. Right now these farms produce 70 percent of the pork. This means that the issues of farm reconstruction, expansion and industrial technology are critical.

To ensure increased meat production and greater effects of scientific and technological progress on the pace of development of modern production, there must be continuous improvements in the education and in the work qualifications of all those in the livestock sector.

During the time these complexes have been in operation many specialists and other skilled workers have received training at both secondary and higher-level institutes, at agricultural institutes of professional and vocational education, and in special courses. Since 1974 more than 6,000 specialists and other workers have been sent to these complexes, including more than 600 in 1982. Several of the larger enterprises have schools and also courses for specialists.

Indices of work performance of the best collectives testify to the sector's huge potential, this inherent in the farm complexes. This potential is not fully exploited on many enterprises, and this can be observed even on the larger complexes, those raising and fattening 108,000 hogs per year. Such farms were modeled on similar projects, have the same production technology, receive the same mixed fodder from state reserves, yet they differ by work indices.

Out of the 27 complexes for 108,000 hogs that have been in operation for more than 3 years, 16 have reached full productive capacity, 11 have not.

Those complexes that have attained planned productive capacity levels averaged in 1982: 13,000 tons of pork (live weight), 9.3 piglets per litter, a daily weight gain of 627 grams and delivery weight of 125 kg per pig. Average expenditure per centner of weight gain was 4.6 centners of feed units and 2.8 man-hours; the cost was R89. The complexes that have not reached planned productive capacity levels averaged 8.5 tons of pork per farm in 1982 and daily weight gains of 534 grams. They reported excessive labor and input expenditures per unit of output. These farms did not attain the necessary herd replacement rates and only supplied the state with an average of 85,000 tons of pork instead of the planned 110,000 tons.

The following and other complexes are not working as efficiently as they should: Malinovskiy of Krasnoyarsk Kray, Gubkinskiy of Belgorod Oblast, Kremenskiy of Voroshilovgrad Oblast, Volynskiy of Karaganda Oblast and Gallya-Kuduk of Tashkent Oblast.

The basis for a highly efficient hog industry is balanced feeding, and this becomes even more crucial on complexes because of their greater concentration of animals.

At the present time only complexes for 108,000 and 54,000 animals have supplies of reconstituted milk, pre-starter and starter feed mixes; these complexes have an average daily weight gain of 576 grams and produce more than 150 kg of pork per pig.

State complexes for 12,000 and 24,000 animals per year as well as various kolkhoze and inter-farm enterprises do not have supplies of reconstituted milk and starter feeds. As a result there is an inadequate growth and development of animals in the first months; average daily weight gains are 250-300 grams. Raising and fattening the pigs takes 320-346 days here. If there were adequate supplies of starter and reconstituted milk on complexes of all sizes, then an additional weight gain of 250-300 thousand tons per year could be attained at the same production level without additional expenditures.

The USSR Glavzhivprom is currently building plants for the production of special mixed fodder, including starters, and reconstituted milk.

Up until the present time, unfortunately, the products of many feed-producing plants do not meet industry standards for raising and fattening pigs in industrial complexes. Manufactured feed often does not meet requirements set by the State Committee for Standards, is contaminated with toxic microflora and has an unbalanced mixture. There are instances of improper mixtures of raw materials and improper supplies of the right feed mixes, all of which means excessive expenditures of feed and reduced animal productivity.

Many complexes must themselves eliminate errors in the feed-production industry, for this is really an unjustified overuse of state supplies. In 1982, for example, the Permskiy Complex of Perm Oblast spent an additional R1 million for feed additives (fish meal, roasted barley, meat-bone meal that they themselves produced, coniferous-grass meal, sugar, etc.), and the Il'yinogorskiy Complex of Gorkiy Oblast spent up to R1.5 million.

For improved animal feeding, many complexes produce enriched meal and other types of feed from crops grown on fields irrigated with manure drainage. This is a significant reserve which can be used to reduce the shortage of proteins and vitamins in animal feeds.

Those farms that use manure and drainage as fertilizer have feed crop yields 1.5-2.0 times greater than other farms, 6,000-10,000 feed units, and annually produce 1,500-2,000 tons and more of vitamin-rich grass meal.

The amount of liquid manure and drainage from livestock enterprises is sufficient to fertilize 1.2 million hectares, although at the present time not more than 210,000 hectares receive this organic nutrient. This is because the republics are slow to resolve the problems of allotting and setting up irrigated fields for hog complexes, although farm complexes must meet the 1985 goal of setting up the necessary irrigated fields for the production of grass meal and mixed fodder.

During the first few years of transforming the livestock sector onto an industrial basis, an expensive process of artificial biological purification has been used for neutralizing manure drainage.

The European Economic Commission of the United Nations, at a symposium in Geneva in September 1981 on pollution of water resources by animal wastes, noted that the biological purification of drainage used for fertilizer or fertilizer irrigation is not to be permitted inasmuch as it leads to a deterioration of the ecological balance. The symposium recommended immediate development and perfection of the technology for using liquid manure and its liquid fraction as fertilizer.

The construction of facilities for artificial biological purification just means large, unproductive outlays of capital investments and electricity. In addition, the destruction of the organic matter in liquid manure and drainage reduces their value as organic fertilizer and leads to irretrievable losses

of nitrogen (almost 70 times) and other nutritious plant elements. This greatly reduces possibilities for increased yields of feed crops on the same farms.

Speaking of reserves available for increased productivity in the hog sector, we must note the critical role of technical equipment and its effect on the sector's economic efficiency. Workers in industrial hogbreeding have well-founded complaints about the quality, durability and reliability of the installed equipment, especially the heating equipment and units for feed distribution. Certain models do not meet technical standards and have poor operational characteristics. Specific measures have been worked out and approved by the USSR Ministry of Agriculture, the State Committee for the Supply of Productive Equipment for Agriculture and the USSR Ministry of Machine Building for Animal Husbandry and Fodder Production [Minzhivmash] to eliminate defects in equipment--progress here is extremely slow. Heating equipment is produced with reduced air capacity, 30-40 percent less than certified amounts; readapting the units has not proved successful. The TV heating units have still not undergone production tests in conjunction with the Pritok-1 control units.

The automated feeding trough is noted for its poor quality. It frequently happens that complexes receive units that are not treated for corrosion (poorly galvanized, badly painted), and this reduces their operational life by a factor of two-three. Industrial mixers are neither reliable nor durable as are chain-driven transport mechanisms with pneumatic gates, the rotating mechanism of the KPS.108.41.01 feed mixer, etc.

Minzhivmash has not fulfilled plans to develop and manufacture the necessary equipment for preparation and distribution of low-moisture feeds on hog raising complexes.

Complexes also have inadequate supplies of veterinary preparations, medicines and disinfection materials. The supply of antibiotics is no more than 35-40 percent of what is needed, sulfonamide compounds only 25-27 percent, disinfectant materials (including chlorine, lime, Formalin and caustic soda) 45-50 percent.

Complexes are experiencing a shortage of disinfection equipment that would meet veterinary service standards. The OM units that are produced have a number of critical defects even for such a basic operation as cleaning facilities. The popular UDP compact disinfection units just aren't produced in adequate numbers--only 100 units last year nationwide. The veterinary service hardly has any syringes, contact and non-contact thermometers, diagnostic instruments for controlling sow fertility and determining the live animal's meat quality. There is not enough laboratory equipment, instruments, the necessary medium for sperm dilution, so important for accurate and continuous work, and centers and stations for artificial insemination of swine. Selection-hybrid hog centers are now being built in various areas of the country. The first one, the Povolzhskiy in Kuybyshev Oblast for 59,300 animals with an output of 18,000 hybrid pedigreed pigs, is already in operation.

Steady work on complexes for 108,000 and 54,000 animals can only be attained when there are pedigree farms; yet the latter are to be found on just 40 percent of enterprises of such size, and of these only half have mastered the production technology. All year round these farms are able to provide a steady supply of pedigreed pigs more adapted to the conditions of industrial technology; they reduce delivery time by a factor of 8-10 for pigs needed to rebuild the herd and lessen the chances of infection, minimizing it.

Those complexes that feed 24,000 and 12,000 hogs per year must build pedigree reproduction sectors or set up regional reproduction farms.

One of the main tasks facing directors and specialists of industrial complexes is to research the structure of the herd for the pedigree farm and determine the number of sows necessary for purebred replacement pigs for the farm and crossbreeds for the agricultural enterprise; to set up evaluation procedures for the productive qualities of live animals in the replacement herd; and to use those male pigs for industrial breeding which have been fed in a controlled environment and which come from high-productive lines.

Increased efficiency in the work of complexes is directly dependent on unswerving observation of industrial technology requirements, on improved productive characteristics of the herd, better farming practices and organization of labor, increased state and plan discipline, efficient and careful use of labor and financial resources, and elimination of current shortages in material and technical supply.

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PROFIT, LOSS ANALYSIS IN KIROV OBLAST KOLKHOZES, SOVKHOZES

Moscow SOVETSKAYA ROSSIYA in Russian 21 Jul 83 p 2, 26 Jul 83 p 2

[Article by A. Petrov, SOVETSKAYA ROSSIYA correspondent, Kirov Oblast: "It is Nice to Repay Loans"]

[Text] According to the Kirov "Oblsel'khozupravleniye [Oblast Agricultural Administration], 7 years ago 36 percent of the oblast's kolkhozes and sovkhoses had operated in the black. Their overall profits were 24 million rubles lower than the losses of the lagging and economically weak farms. The profits did not cover the losses. The aid provided by the state then and in the subsequent years to the non-chernozem countryside was explicitly intended to strengthen the material-technical base of the farms and expedite the construction of housing and social, cultural and communal facilities with the object of enabling the kolkhozes and sovkhoses to augment with each year their output of agricultural products.

In 7 years the Gosbank has granted 600 million rubles in long-term loans and more than 1.5 billion rubles in short-term loans to the kolkhozes alone (there are 310 kolkhozes in the oblast). Substantial funds for capital investment and loans have also been granted to the sovkhoses. It might appear that everything was done to place the farms solidly on their feet and recoup the loans in the form of additional tons of grain, milk, meat....

However, the hopes proved to be misplaced. The output and sales of agricultural products have during all these years been lagging markedly behind the plan targets and the curve of effectiveness of the investment loans has been steadily creeping downward. Thus while during the first year of the 10th Five-Year Plan the gross output of farming and animal husbandry per ruble of all kinds of loans was 1.71 rubles in the kolkhozes and 1.40 rubles in the sovkhoses, during the first years of the 11th Five-Year Plan this indicator has declined in half. Only 24 percent of the farms operated in the black.

The reasons were quite a few. For one thing, in 3 out of these 7 years the weather was unfavorable. For another, the wage system is imperfect. But the principal reason was that the rôle of the economic service was obviously minimized. Few kolkhozes and sovkhoses conducted a thorough profit-and-loss analysis, compared the results with the available resources and took into account the possibilities for further expanding production.

The economists somehow remained unworried by the fact that the targets for the lagging branches stay the same in the long-range plans either and that wages were calculated in terms of output per hectare rather than in terms of the end-result.

As a consequence, at some unprofitably operating farms guaranteed wages did not become a stimulus for increasing labor productivity and instead they offered a guarantee for high wages regardless of the quantity and quality of the end-output.

G. N. Tatarinov, the chief of the finance office at the Oblsel'khozupravleniye, said: "Of course, local farm and rayon-administration experts should attend to eliminating instances of this kind. Yes, we clearly underestimate the role of the accounting services and farm managers strive to fulfill the plan at any price, paying little heed to the production cost of the kolkhoz or sovkhoz. This, naturally, has not contributed to increasing the yield per loan ruble."

According to Gennadiy Nikolayevich, a no less important destabilizing factor is the gigantomania enveloping the construction of hog and milch-cow complexes. The new large hog raising enterprises produce pork at a loss, while the productivity of cattle on dairy farms has declined, since there are no cultivated pastures or meadows near the cow pens and no nearby fodder crop growing. Everything has to be brought in from a distance. The expenditures are rising but milk output is not.

Who is at fault for these deficiencies? This question simply amazed A. K. Metelev, secretary of the Yur'yanskiy Rayon party committee, and V. N. Serov, chief of the rayon agricultural administration (and of the RAPO [Rayon Agro-Industrial Complex] as well). After all, somebody had made the decision to build in that rayon an inter-farm complex for fattening 2,000 head of young cattle.

The comrades spread their arms. One had not yet worked in the rayon when that decision was made, and hence he is not responsible. The other does not remember, but he believes that once a decision is approved and transmitted from "the top," it is not necessary to explain, but to build, the more so considering that the state was paying for the construction of that inter-farm complex.

Last December the complex was "opened" for use in great haste and in unfinished form. But it was released not to the customer who had ordered it, namely, in effect, the rayon agricultural administration, but... to the Kolkhoz "Zavety Lenina." According to V. P. Rassokhin, party organization secretary at that kolkhoz, this came as such a surprise that the board chairman I. G. Slavutin was categorically opposed to its acceptance.

He said: "Otherwise I'll have no choice but to resign. That thing will only cause us losses."

He did not resign, because he was not allowed to do so. But the complex all the same was transferred to the kolkhoz's jurisdiction--without approval by its members, let us add. This farm, already operating at a loss, was burdened with an additional 1.5 million rubles in loans, a largely unfinished facility and the problem of providing fodder for the herd.

The rayon agricultural administration gave assurances: "Never mind, we will shortly dispatch land reclamation personnel to the kolkhoz. They will reclaim 300 hectares of meadows and pastures. The fodder will be there."

Fine, but when? But the livestock has to be fed even now. Incidentally, how in the meantime can loans be repaid and a definite percent of depreciation be calculated? Clearly the yield per loan ruble will not soon become tangible. The kolkhoz and the state are the losers, while the individual who had made this hasty decision has remained untouched: it has not been possible to identify him.

At present anxiety about the low effectiveness of production loans is displayed at various levels. It is expressed by the heads of the rayon office of the oblast finance agencies and the RSFSR office of the Gosbank. Thus, V. I. Kondrashov, chief of that office's economic-planning division, confirmed that the effectiveness of bank loans has declined not only in Kirov Oblast.

He declared: "Kirov Oblast is just about average in this respect. Genuine praise is deserved only by Leningrad Oblast, where the accounting services perform well and indicators are higher. As for the other regions of the Non-Chernozem Zone, cost accounting has not so far been properly introduced there and proper ways of calculating and economizing have yet to be learned there. So far as the bank is concerned, it has fulfilled its 'obligations' by granting all the allotted loan funds."

All this is correct. The bank grants loans immediately, especially short-term loans, if a kolkhoz or sovkhos requests them for the purpose of paying wages. The applicable rule here is astonishing: a loan officer may be aware that a farm has overspent its funds and may object to this, but he has no right to refuse a loan application. Everybody gangs up against the loan officer: the rayon agricultural administration, the party committee and the concerned ministry: a delay in paying wages is viewed as an extraordinary occurrence, so that the loan officer has no choice but to append his signature to the loan application, which will not be repaid when due.

The chief of the planning-economic administration division glossed over only one fact: the bank is not a mere cashier's office--it not only grants loans but also is supposed to monitor their utilization. Its obligations include monitoring the manner in which the loan funds are spent by the debtors, assisting the farms to streamline their accounting procedures and promoting greater effectiveness of all outlays. Under the instructions in force, the bank can and should strictly and principledly bring influence to bear on the heads of those kolkhozes and sovkhoses who spend loan funds irresponsibly and without keeping records and illegally raise the wages of workers in basic production and especially of the fired construction brigades whose members sometimes are paid double or even thrice the standard wage rates--and not one of the chiefs questions this.

Such a situation cannot be tolerated any longer. The bank, the economic service of the agro-industrial complex and the agricultural commissions of the local soviets are duty-bound to bring order into the bookkeeping of expenditures and tighten financial and work discipline.

It is time for the farms to introduce strict economies, eliminate unproductive expenditures and tighten the monitoring of the spending of financial and material resources. It is not normal when those who perform poorly and produce less get paid more than conscientious and most productive workers. And yet, this abnormal situation still persists and hardly perturbs anyone. More anent this in the next report.

[26 Jul 83 p 2]

Fewer than 30 kilometers separate the "Korminskiy" Sovkhoz from the "Progress" Kolkhoz. Arkadiy Nikolayevich Charushin has been the sovkhov's director for 13 years. Vitaliy Mikhaylovich Tashirev has been reelected the chairman of the kolkhoz board for the 7th year in a row. One is a zootechnician by education and the other an agronomist. The soils and workload per person on both farms are about the same, but their economic indicators differ sharply.

The "Progress" Kolkhoz, which had operated in the black during the 9th Five-Year Plan, has retrogressed in the last 7 years and operated in the red for the last 6 years. During the first 2 years of the 11th Five-Year Plan its losses totaled 809,000 rubles.

The sovkhov, by contrast, has strengthened its economy and operated in the black in 6 of the last 7 years. It still is not operating as profitably as it might desire: its total income during the last 7 years was 633,000 rubles. But its regular annual increase in income even so enables this farm to resolve social questions and strengthen its personnel.

What is promoting the successes of one farm and holds the other back?

While it has less land, fewer livestock and a smaller workforce, the "Progress" Kolkhoz in 1976 had the same energy availability per worker as the "Korminskiy" Sovkhoz and the value of its fixed assets was 450,000 rubles higher. Yet its crop and livestock productivity was lower than that of its neighbor. It could have properly utilized flax, a profitable local crop, could have been a great help. It should have utilized most effectively the 950,000 rubles in long- and short-term loans granted to it by the state in that year.

This did not take place, however. The yield of grain crops was 8.2 quintals per hectare, and the milk yield per cow proved to be 1,040 kg lower than at its neighbor.

In the last 7 years the kolkhoz had borrowed from the state more than 7.5 million rubles but its gross output totaled only 4,345,000 rubles. An even smaller part of that output was sold. Notwithstanding this, the wages of kolkhoz members have been steadily rising instead of diminishing. On this lagging farm the pay per man-day proved to be much higher than on its profitable neighbor farm--and than the rayon-wide average. In the last 2 years of the current five-year plan, gross income at this kolkhoz was only one-third of the total wages paid to kolkhoz members. No funds were available for accumulation, and there were no profits.

A year passed since my first meeting with V. M. Tashirev. For the first time in recent decades grain harvests in Kirov Oblast averaged 14.6 quintals per hectare and the oblast's gross grain harvest reached more than 2 million tons. The indicators of animal husbandry and rural construction have improved somewhat, and the yield per loan ruble increased on some farms.

Changes also have taken place at the "Progress" Kolkhoz. It has built with its own resources seven housing units. The rayon MPMK [expansion unknown] built a grain-drying facility, three single-family houses and the first stage of a dairy complex. New high-power tractors and other equipment were received. In 1982 the state granted 1,770,000 rubles in long- and short-term loans to this kolkhoz and wrote off half a million rubles in earlier debts.

But this generous assistance, too, did not improve the situation. What is more, the kolkhoz's output of grain, milk and meat was even lower than it had been during the first year of Tashirev's stewardship. All types of production other than flax proved to be unprofitable.

In principle, the flax field could yield more. But, through the efforts of the farm's heads, 3 years ago the size of that field was halved, and last year a part of the harvest could not be collected owing to poor organization. The losses were tenfold as high as the increase in flax harvest, and the "loan ruble" clearly produced nothing in return there.

The inertia of work and thought, uncreative attitude toward the tasks and, lastly, the failure of the manager to be demanding toward himself in his actions and behavior have largely contributed to relaxing discipline among the farm personnel and prompting it to be negligent toward its duties. Not only board members forgot to calculate expenditures. Few are worried that the kolkhoz is not repaying its loans.

Were this kolkhoz only an isolated instance, it would perhaps not deserve such a detailed discussion. But in recent years this writer happened to visit many Vyatka farms and observed that most of the lagging kolkhozes and sovkhoses have the same problems. Whether we consider the "Progress" Kolkhoz in Arbazhskiy Rayon or the "Korobovskiy" and "Solovetskiy" sovkhoses in Khal-turinskiy Rayon, and whether we consider the Kolkhoz imeni Komintern, representative of the oblast's southern zone, or such farms farther to the north in Yur'yanskiy Rayon as "Pamyat' Il'icha" or "Lozhkarskiy," the most often voiced complaints are the same: shortage of manpower, shortage of housing, lack of roads and the insulting lack of attention from land reclamation agencies.

V. I. Babintsev, chairman of the "Pamyat' Il'icha" Kolkhoz, said: "Here only about 100 able-bodied persons have remained, compared with 150 in the recent past. Owing to lack of manpower, supervisory personnel have to personally prepare fodder, help repair equipment and plant and harvest grain. To keep youth on the farm, two apartment buildings with proper amenities have to be built. We cannot build them with our own resources alone."

The "Pamyat' Il'icha" Kolkhoz at present owes the bank 3.5 million rubles. In recent years some 60 dwellings were built with bank funds rather than with profits from operations. Why then is the number of kolkhoz members declining instead of growing?

To live fully, man needs not only housing and high wages. The moral climate in the collective and tangible results of labor are important factors. But on that farm work discipline is low and drunkenness and profligacy flourish. The culprits are not properly made accountable. As a result, conscientious workers cannot endure this atmosphere and transfer to other farms. So now, 30 percent of the equipment at that kolkhoz lies idle, fields are poorly farmed and there is much manual labor involved. "Record" low harvests are a direct consequence of all these factors.

Profitable farms do not operate thus. At the aforementioned "Korminskiy" Sovkhoz the organization of labor and the attitudes of personnel differ markedly from what you observe at the lagging kolkhozes. A well-considered shop structure of management has been introduced there, with each expert being entirely responsible for his sector of operations. One explores ways of raising the productivity of the animal-husbandry shop; another, agricultural methods; and still another, fodder production.

Most of these experts are native young people. They graduated from institutes and technikums to which they had been sent by the sovkhov. But what matters most is that everyone, beginning with the director and the party committee secretary, has long since grasped the idea that under their conditions animal husbandry is a profitable branch, and they attach primary importance to problems of increasing the milk yield of cows and the weight gain of the cattle being fattened.

Last year milk yield per cow averaged 3,118 kg, or 1,194 kg more than at the neighboring "Progress." Animal husbandry output per 100 hectares of cropland is higher, and production cost is much lower. Moreover, the sovkhov delivers to the state twice as much output, and of better quality at that.

But perhaps we are comparing something that cannot be compared? No, both farms are nearly of the same kind as regards their resources and workload per worker, and what is more, even now the value of fixed assets at "Progress" is higher than at "Korminskiy." The difference lies in something else: in pursuing specialization in milk and meat production, the sovkhov management did much--if not all it could--to modernize animal husbandry operations and secure them with a more varied range of fodder. The livestock was of concern not only to the animal husbandrymen but also to those working in the fields, and their wages were made directly dependent on the end-result.

Even though no one gave this sovkhov anything in excess of the allotted resources and reclamation agencies still have not done anything about its land, the wise heads of this sovkhov knew how to utilize its own resources--through improved cultivation and the application of fertilizers--to increase grain and fodder crop yields, raise purebred cattle and bring livestock operations into order. They feel no sympathy for slovenly workers and loafers. And so they achieved a turnabout. Now at that kolkhoz cows are regularly fed and milked, fodder is supplied promptly, and instructions of experts are followed. And if someone breaks a rule, he is not forgiven. He has to justify himself to his comrades and is deprived of many privileges and allowances.

These rigorous requirements have not repelled the employees. On the contrary, there is no personnel turnover at that sovkhos, and those who had left it for other farms are now returning to it.

A major contribution to the success of the collective was made by communists, and primarily by the sovkhos director. Like true masters of their farm, they display concern for improving the living and working conditions of employees, and they have selected the right experts, introduced cost-accounting operation and are analyzing and counting every kopeck and teaching others how to do it.

But the sovkhos is a state farm, whereas the kolkhoz is a cooperative farm. Perhaps this is the reason? No, experience does not warrant this assumption.

The "Put' Lenina" Kolkhoz in the oblast's Kotelnichskiy Rayon is famed throughout the country for its accomplishments. In the mid-1950s it had in no way differed from its relatively poor neighbors. But then its direction was taken over by A. D. Chervyakov, a talented and practical production organizer who, using the same personnel, raised the kolkhoz to a higher level.

It can be said without exaggeration that this is a model farm. Each year it copes with its targets and derives a net income of 1.5 million rubles. "Put' Lenina" is the only kolkhoz in the oblast where, under the shop structure of management, all the subdivisions have been operating under cost accounting principles for the last 10 years.

On comparing the performance of the leading and lagging collectives, once again it can be concluded that the differences between them chiefly reduce to differences in the level of responsibility, organizational work, executive discipline and the competence of managers and experts at kolkhozes and sovkhos as well as to the differences in the ability of local party organizations to encourage work collectives to attain the specified targets.

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PROBLEMS OF EQUIPMENT SUPPLY FOR PRIVATE PLOTS EXAMINED

Moscow SEL'SKAYA NOV' in Russian No 10, Oct 83 pp 18-19

[Interview with Yu. I. Lobov, "Glavkoopkhoztorg" chief, by I. Abramov:
"'Tools' for Private Plots"]

[Text] Private plots of rural inhabitants are burgeoning. The state has placed at the disposal of citizens 7.8 million hectares of land, including 5.8 million hectares of plowland. At the beginning of this year the cattle population on private land plots had already exceeded 24 million head, including 13.4 million cows, along with about 16 million hogs, 31.8 million sheep and goats and more than 388 million head of poultry.

Our correspondent interviewed Yu. I. Lobov, member of the board of the Tsentrosoyuz [Central Union of Consumers' Cooperatives], chief of the "Glavkoopkhoztorg" [Main Administration for Trade in Metalware and Household Goods]. Yu. I. Lobov commenced by saying:

[Answer] The possibilities of private plots for augmenting food resources are great. This is convincingly demonstrated by statistics. Suffice it to mention that last year farm output on peasant plots totaled 32.5 billion rubles.

It is in our common interest to do everything to increase the yields of private plots, so that every inch of plowland, meadow, pastureland or so-called poor land would be made more fruitful with the competent and caring hands of the truck gardener and the "mini" livestock farms would produce more meat, milk and eggs.

But to this end the private plot owner needs help. In what? That is not easy to describe all at once. Much on this subject has already been written in 'SEL'SKAYA NOV', insofar as I know. Even so, I should like to dwell on one problem.

It is necessary to provide the private plot cultivator with more tools--with machinery and convenient implements facilitating the care of the truck garden, orchard or livestock. Consider kolkhoz and sovkhos lands: how much new

equipment has appeared on them! But once the rural toiler's day of public work is over and he returns home to his private plot, he has to tend it in the same old-fashioned manner, just like 20 or 30 years ago.

Picturesquely speaking, experienced operators of heavy-duty "Kirov" tractors have to hoe the soil with mattocks on their private plots.

[Question] Yuriy Ivanovich, the problem is clear. You know the broad picture, as the saying goes. As known, consumer cooperatives have been charged with the duty of providing private plot owners, members of orchardry and gardening societies, with farm implements, means of small-scale mechanization and pesticides and fertilizers....

[Answer] And we do try to implement this task. First of all, let me point out that 133,000 cooperative enterprises are trading in these goods in the countryside. The broadest variety of these goods is concentrated in the premises of rayon trade centers and "Khozyaystvennyye tovary" stores. Sales of groups of goods adapted to specialized needs are being introduced: "For Care of Livestock and Poultry," "For Orchardrymen and Truck Gardeners," "Everything for Tilling the Soil." These groups include such subgroups as "Orchardry and Truck Gardening Implements," "Mineral Fertilizers," "Crop Protectants." Lists of equipment items have been prepared. In introducing them we proceed from specific local conditions.

In recent years the network of specialized stores designed to sell goods to private plot owners and members of orchardry and truck gardening societies has grown markedly. For example, specialized "Orchardry," "Household" and "Home-Orchard-Garden" stores have been organized on the basis of the existing "Khozyaystvennyye tovary" stores within the Krasnodar, Stavropol', Brest, Novgorod, Voronezh, Ryazan', Volgograd and Penza consumers' societies. Currently about 80 trade enterprises of this type operate in the countryside of the RSFSR, while 400 stores trading in agricultural goods have organized the reception of orders for implements and mineral fertilizers. Of course, this is little but, as the saying goes, the beginning is always hard.

The experience of the Smolensk cooperatives is noteworthy. Recently a NOT [Scientific Organization of Labor] laboratory has, jointly with the division for organization and equipment under the Smolensk Oblast Union of Consumers' Cooperatives, reviewed the equipment lists according to which the wholesale bases are to maintain inventories of 66 types of orchardry and gardening implements, 7 kinds of mineral fertilizers and 10 kinds of crop protectants; in the warehouses of the rayon consumers' societies the corresponding indicators are 62, 7 and 10, respectively; and in the stores trading in farm goods, 45-60, 4-7 and 10, respectively. Orchardry and truck gardening implements--15 kinds--are sold in "store-mobiles." Altogether, within the system of the oblast union of consumers' societies, 1,200 "Tovary podsednevnogo sprosa" [Staple Consumer Goods] stores, 86 "store-mobiles," 120 farm goods stores and 6 "Home-Orchard-Garden" stores take part in selling these goods on grouping them according to category of operations: "Everything for Tilling the Soil," "Everything for Cultivating the Orchard," "Mineral Fertilizers," "Crop Protectants." Eighteen stores were especially designated for serving the orchardry societies.

Active forms of trade are widely employed in the oblast. Exhibitions of goods for sale and farmers' markets are held at the central farmsteads of kolkhozes

and sovkhoses. Contests for the best store selling goods for orchardry and truck gardening are being organized.

[Question] Exhibitions of goods for sale and farmers' markets are, of course, a useful thing. But, Yuriy Ivanovich, don't you agree that far from all of the merchandise demonstrated at the exhibitions can be freely purchased in stores? This is, incidentally, also evidenced by letters from our readers. What are the consumers' cooperatives doing to meet more fully the demand of buyers?

We structure our work with industrial enterprises to take into account the shortcomings of past seasons. Dozens of new enterprises have been recruited for manufacturing goods needed for private plot farming. At present rural trade is being supplied with orchardry and truck gardening implements, mineral fertilizers and crop protectants by nearly 450 enterprises of 70 ministries.

The cooperatives in the Baltic republics, Belorussia and Moldavia are actively collaborating with industry to expand the output of orchardry and truck gardening implements as well as of means of small-scale mechanization. On the initiative of these unions of consumers' cooperatives, an interdepartmental coordinating council has been set up to coordinate the efforts of various ministries and departments in producing goods for private plot owners and members of orchardry and truck gardening societies. The council reviews output plans and recommends the best models of implements and equipment for series production. Lastly, the council monitors the updating of the variety of output. Let me note that the rural inhabitants of these republics hardly ever send complaints about shortages of goods for private land plot farming. We hope that other regions, too, will follow this example.

In general, it can be stated that the broadening of contacts with suppliers is already bearing fruit. This year industry will provide 106,000 orchard ladders--33,000 more than last year, and 65,000 more orchard handtrucks and barrows than last year. The output of prefabricated hothouses and garden pruners has increased markedly. The demand for rakes, shovels, hoes, mattocks, forks, weeders, pruning knives, pruning saws, spading forks and scoops, sets of soil-tilling and viticultural implements, hand-operated pumps, garden hose and grape presses is being met.

If in places the supply of these goods in stores is not consistent, this is most often due not to objective causes but to poor management by trade personnel, its lack of skill in studying and analyzing buyer demand.

Let me add that the consumer societies should not simply bring in goods from distant places but seek local producers. This is being done in Kurgan Oblast, for example. Experts from the union of consumers' cooperatives in that oblast analyzed the possibilities of all industrial enterprises in the oblast and, with the aid of local party and Soviet organs, placed orders for not only simple but also intricate implements with some of these enterprises. This is also being done in Omsk Oblast, Krasnodar and Stavropol krais and the Ukraine.

[Question] Even so, the rural dweller or the town dweller who maintains a private plot often leaves a store disappointed because what he wants is either unavailable or....

[Answer] Unfortunately, this does happen. Some goods needed by private land plot owners remain in short supply, especially sprayers, garden pruners and watering-cans. We are trying to recruit new enterprises for the manufacture of these items.

[Question] Yuriy Ivanovich, it would be interesting to know industry's attitude toward the needs of private plot farming.

[Answer] Let me cite just one instance. The enterprises of the USSR Ministry of Tractor and Agricultural Machine Building--the leading producer of orchardry and truck gardening implements and tools--last year produced 26.6 million rubles of these goods, while this year they intend to increase their output to nearly 40 million rubles. Their output is exceeding the target figures.

The ministry has set up a main design bureau specializing in the development of implements and tools for private plots. Last year engineers at that bureau proposed several new designs for series production, including four models of single- and multiple-row seeders for vegetables and flowers. Their design is simple and requires no special training. The new hydraulic tree trimmer, which requires much less physical effort than its mechanical predecessor, will ease orchardry labor.

[Question] The editors continue to receive from readers many complaints about the unavailability of means of small-scale mechanization in rural stores. Many rural dwellers, especially mechanizers, are trying to solve the problem on their own by devising all kinds of self-propelled chassis, small tractors, etc. When will, finally, the private plot owners be relieved of the need to "invent the bicycle"?

[Answer] This is not a new question but it indeed remains acute. A survey of private plots in various regions of the country has revealed that private livestock owners have a special need for "mechanical helpers." The daily expenditure of time on the upkeep of one cow averages 1.3 hours. About 80 percent of the rural families that do not keep livestock are not acquiring it precisely for this reason.

Let me try to outline the situation as regards the production of mini-mechanisms. The production of small-sized tractors is being organized in Kutaisi. By 1985, their output should reach 15,000. Current plans provide for an output of 2,000. But these plans (for the umpteenth time!) will hardly be fulfilled: the construction of the factory building is being delayed and the tractor model has not as yet been approved.

The MTZ-05 small tractor has proved its worth. It is reliable and simple to operate. The Minsk Tractor Plant is exploring the possibilities for expanding its production.

Unfortunately, the enterprises of the USSR Ministry of Machine Building for Animal Husbandry and Fodder Production are not fulfilling our orders for compact mowers. Of the 75,000 mowers of this kind planned for the 5-year period, we received only about 4,000 during the first 2 years. Moreover, the

series-produced model is meeting with complaints from buyers: its design is awkward and the machine is heavy, weighing about 80 kg.

On our initiative, enterprises of the USSR Ministry of the Aviation Industry have devised a prototype model of a compact mower weighing only 20 kg. The question of its series production is being currently decided upon.

Many means of small-scale mechanization, even the best-designed ones, are being manufactured in extremely limited quantities. For example, the Ivanovskoye Production Association for the Manufacture of Spare parts under the USSR Ministry of Machine Building for Light and Food Industry and Household Appliances proposed a trial series of the so-called rural machine whose designers "taught" it many operations: straw and tuber cutting, sawing and jointing lumber, shelling corn cobs, grinding grain, sharpening implements. The machine is provided with a set of varied accessories. It is compact, occupies little room, and safe to operate. Switching from one mode to another and adjustment take only a few minutes.

I believe that many would like to acquire such a "mechanical helper," but....We will have to wait until its mass production is organized.

It seems to me that so long as nearly every new machine or accessory at once becomes hard to get, it would make sense to lease them rather than sell them to individuals. Of course, priority in receiving means of small-scale mechanization should primarily be given to those who overfulfill their deliveries to the procurement stations.

[Question] But suppose a store is supplied with a sufficient quantity of some or other merchandise. What would then be expected of the consumer cooperatives?

[Answer] They would be expected to teach the population, our potential buyers, how to use properly the available merchandise. Don't be surprised, but a thorough study of buyer demand has revealed to us that many private plot

owners refrain from purchasing new tools and implements because they are unfamiliar with their operating qualities.

Let me cite a specific instance. Cooperatives in Kurgan Oblast tried to determine the demand of the rural population for mineral fertilizers. It turned out that most private plot owners and members of orchardry and truck gardening societies were using these fertilizers improperly. As a result, the fertilizers did not enhance crop yields markedly and people underestimated their potential.

We conducted a broad publicity campaign in the form of a monthly day of sales of farm implements, crop protectants and mineral fertilizers. Now the demand for the fertilizers is rising rapidly.

[Question] Sheds and other structures are indispensable on private plots. Yuriy Ivanovich, what is being done about sales of the building materials needed for this purpose?

[Answer] Within the system of consumer cooperatives, lumber and building materials are being sold by more than 1,500 stores-warehouses and approximately 24,000 farm goods stores, most of them opened in the last 5 years.

During the first 2 years of the 11th 5-year Plan sales of cement increased by 40.6 percent; roofing slate, by 27.7 percent; window glass, by 11 percent; lumber, by 4.8 percent; bricks, lime, chalk, alabaster and other local building materials, by 11.4 percent; and miscellaneous building materials, by 6.7 percent.

But the funds allocated by consumer cooperatives on lumber and other building materials do not suffice to meet the demand of rural dwellers. In particular, the market supply of wooden houses and of their prefabricated components has recently been contracting instead of expanding. Wooden houses are being built and shipped without being provided with annexes for the upkeep of livestock and poultry and storage of vegetables and potatoes.

Violating the existing regulations, the USSR Gosnab provides for supplying cement in bulk form for the market. Owing to the absence of the necessary means of mechanization of the loading and unloading of glass shipped in large containers and crates, problems arise in providing it to the retail trade network.

These matters might seem to be trivial. But because of them there is appearing an artificial shortage of certain goods, along with concomitant problems for buyers.

I am convinced that nothing can be trivial in such an important matter as helping private plot farming.

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ADMINISTRATIVE PROBLEMS OF MEAT PRODUCTION ENTERPRISES WITHIN RAPO SYSTEM

Moscow MYASNAYA INDUSTRIYA SSSR in Russian No 10, Oct 83 pp 12-15

/Article by Doctor of Economic Sciences S. S. Shnitser and Candidate of Economic Sciences V. B. Dardik, All-Union Scientific Research Institute of the Meat Industry/

/Text/ In accordance with the Standard Statute on the Rayon Industrial Association of Enterprises the organizations and enterprises of the agroindustrial complex form part of rayon agroindustrial associations (RAPO). At the same time, those that service several rayons can form part of RAPO in agreement with superior bodies.

Basically, meat industry enterprises receive livestock and poultry from several adjacent rayons. In this connection the question arises as to whether it is advisable to include these enterprises in the RAPO structure and to what position on this matter the sector's enterprises and associations should adhere. Some workers assume that, since production associations form part of oblast (kray and ASSR) agroindustrial associations, there is no need for enterprises receiving raw materials from several rayons to form part of RAPO. One cannot agree with this. We assume that all the sector's enterprises, irrespective of the number of rayons serviced by them, as a rule, should form part of RAPO. This will enable them to establish closer relations with the farms of their rayon, the Rayon Agricultural Equipment Association and other organizations and with the rights of a RAPO member to more efficiently solve problems connected with production and economic activity and to improve mutual relations with the RAPO of adjacent rayons supplying raw materials to enterprises and with oblast (kray) APO /agroindustrial associations/.

In a number of Union republics there are no oblast production associations of the meat industry. In these cases all the oblast's enterprises must form part of the oblast (kray) APO and, at the same time, of RAPO. In order to improve the organization of management of the agroindustrial complex, it is necessary to examine the problem of the establishment in these oblasts on the basis of the head meat combine of meat industry associations, which would form part of the oblast (kray) APO and represent all the oblast's enterprises in it. For example, in the Belorussian SSR all the sector's enterprises are directly subordinate to the republic's Ministry of the Meat and Dairy Industry and, at the same time, form part of the oblast APO and RAPO. The creation of oblast production associations would make it possible to establish closer relations between the meat industry and other links of the agroindustrial complex.

It is also necessary to solve the problem of including production units deprived of juridical independence in the RAPO structure. In accordance with the long-term plan for the management of the meat industry the majority of the sector's enterprises have been transferred to the status of production units. Undoubtedly, this measure aimed at the consolidation of economic bodies is progressive and its scale should increase. All production units should form part of RAPO. In this connection it is advisable to extend the rights of production units, in particular to grant them the right to conclude forward contracts for the delivery of livestock and poultry with farms attached to them, to have current subaccounts in the bank and to form economic incentive funds according to the established standards.

Direct relations between meat industry enterprises and agriculture have expanded significantly in the last few years, to which the transfer of the functions of state purchases of livestock in 40 RSFSR oblasts and 9 Union republics to the USSR Ministry of the Meat and Dairy Industry has contributed. Livestock procurements in these regions are now carried out without the participation of intermediate organizations. At the same time, in a number of oblasts in the RSFSR and in the Union republics, as before, procurements are carried out by the organizations of the USSR Ministry of Agriculture and the USSR Ministry of Procurement. In order to improve the procurement system and to strengthen direct relations, it is advisable to transfer the functions of livestock purchases in all oblasts, krays and republics to the meat industry.

The USSR Food Program has confirmed the need for the organization of the acceptance of livestock directly on farms and for its delivery by the transport facilities of procurement organizations.

The system of settlement of accounts for the accepted livestock according to the quantity and quality of meat obtained after the slaughtering of livestock has become widespread during the last decade. At present this system is applied at 96 percent of all the enterprises and 88 percent of the livestock received from state purchases is delivered according to this system. Experience has shown that, at the same time, the interest of farms in receiving a large quantity of the end product--meat--increases, its weight and quality are determined more accurately and the attempt by deliverers to overfeed livestock for the purpose of overstating its weight disappears.

At the same time, some agricultural workers propose a return to the former procedure of acceptance of livestock according to the live weight. Ignoring the serious shortcomings in this system, they believe that livestock should be weighed and its grade should be determined directly on farms. Such proposals cannot be considered substantiated. Livestock is delivered to meat industry enterprises by motor transport (94 percent of the total transport operations) over an average distance of 70 to 75 km. Over such a distance livestock loses live weight only owing to the decrease in the content of the gastrointestinal tract and meat and fat losses do not occur.

The advocates of the weighing of animals and determination of their grades on farms point out that this, allegedly, follows from the requirement to accept livestock in the places of its production. However, such a point of view does

not correspond to reality. The instruction on the procedure of acceptance of agricultural products from interfarm enterprises on the basis of direct relations and indirectly in places of production approved by the USSR Ministry of Procurement and the USSR Ministry of Agriculture stipulates the following: The driver (acceptance official) accepts livestock according to the number of head on farms, checks the correctness of tagging and filling of accompanying documents and delivers livestock to the meat combine. The workers of the meat combine with the participation of the representative of agriculture place livestock in enclosures, avoiding its pooling, slaughter livestock and process carcasses and on the basis of the data on the weighing of carcasses and the evaluation of their quality pay for the accepted livestock at the purchase prices set per ton of meat.

Thus, this system efficiently combines the requirements for the acceptance of livestock on farms (acceptance according to the number of head) and an objective qualitative evaluation of the raw materials received after the slaughtering of livestock. The application of this system of transfer and acceptance of livestock is permitted to all kolkhozes, sovkhoses and other agricultural organizations.

It should also be kept in mind that under the conditions of motor transport specialization, essentially, it is impossible for the driver to bear responsibility for the change in the weight of animals during transportation. Furthermore, the weighing and determination of the degree of fatness of animals on farms would require specialists--commodity experts and veterinarians. On many kolkhozes and sovkhoses weighing facilities do not meet modern requirements and there are no scales. Thus, the transition to the weighing of livestock directly on farms would require considerable expenditures.

In accordance with the government decision the delivery of livestock to meat combines should be carried out by procurement organizations in a centralized manner. This, however, does not mean that transport facilities should belong to meat industry enterprises (associations). The specialization of transport operations is most efficient. At the same time, motor vehicles are utilized more efficiently, the organization of transport operations is improved and transportation costs are lowered. For the purpose of a fuller utilization and an efficient operation of transport facilities it is advisable to entrust the delivery of livestock to meat combines to the USSR State Committee for Supply of Production Equipment for Agriculture or to special motor pools of other organizations. In individual cases transportation can be carried out by meat industry organizations, as well as by animal husbandry complexes.

In every rayon (oblast, kray and republic) it is necessary to determine what organization should centrally deliver livestock and prepare the material and technical base for the performance of these operations with a view to fully changing over to a centralized delivery of livestock during the next few years. On the basis of the data on the volume of raw material resources and the prospects for their growth in the raw material zones of meat combines it is necessary to determine the need for motor vehicles and to develop measures for improvement in the transportation of livestock (installation of loading sites, construction of motor roads and so forth).

Mutual relations between meat industry enterprises and farms are determined by forward contracts for the delivery of raw materials. Under the conditions of agroindustrial integration the content of these contracts should be intensified and expanded. They should reflect not only problems connected with the purchase and sale of livestock through state procurements, but also stipulate the obligations for the slaughtering and processing of livestock not subject to delivery on the account of state purchases, provision of mutual production services for the transportation of raw materials and finished products, production of meat products in the form of exchange operations, meat storage at the refrigerator of the meat combine, temporary assistance by workers and so forth. Forward contracts should be concluded for a 5-year period with an annual refinement.

Often forward contracts are of a formal nature. Suppliers are not materially responsible for their nonfulfillment and do not observe the schedules of delivery of raw materials. It is necessary to increase the efficiency of forward contracts.

In oblasts (krays and republics), where the Skotoprom [Livestock Breeding Industry Administration] system still operates, contracts for the delivery of livestock and poultry are concluded between their offices and meat industry associations. With the transfer in most of the country's rayons of the functions of procurements to the meat industry, along with the conclusion of forward contracts between farms and procurement organizations, it is advisable to introduce the practice of conclusion of agreements between the sector's associations and oblast (kray and republic) administrations of agriculture for the delivery of raw materials throughout the oblast. These administrations should participate in the development of schedules of delivery of raw materials and control the fulfillment of plans and schedules by sovkhozes and kolkhozes. Forward contracts between meat combines and farms should be concluded with the participation of rayon administrations of agriculture, that is, be threesided. To obtain raw materials from adjacent oblasts, contracts for the delivery of livestock should be concluded between recipient associations and procurement organizations.

For the purpose of increasing the material interest of kolkhozes and sovkhozes in the fulfillment of obligations, it is necessary to immediately realize the decision adopted by the food program on the establishment at processing enterprises of agroindustrial associations of the material incentive fund for workers of kolkhozes, sovkhozes and other agricultural enterprises and organizations for an increase in the volumes of delivery of products by them and for an improvement in their quality. It is advisable to establish these funds at enterprises by deducting a certain part of the profit. The amounts of paid bonuses should be differentiated and take into consideration not only the degree of fulfillment of obligations for the delivery of livestock, but the observance of delivery schedules as well.

Bringing the material and technical base in correspondence with raw material resources with due regard for the prospects for their growth and ensuring the continuous slaughtering and processing of livestock and the production of meat products are the urgent tasks of production associations and enterprises.

When determining the raw material resources of enterprises and their capacities, it is necessary to take into consideration not only the volumes of state purchases of livestock, but also the need for the processing of livestock belonging to consumer cooperatives, to subsidiary farms of state institutions and enterprises and to the population.

The network of meat industry enterprises (about 1,000 enterprises) formed over many decades does not fully meet modern requirements. At the beginning of 1982 small enterprises producing 20 tons of meat per shift comprised 71.6 percent and those producing up to 5 tons of sausage products, 64.8 percent of the total number of enterprises. Their share in the total capacity of enterprises comprised 32.1 and 21.5 percent respectively. Large enterprises comprise the following: in meat production, 5.6 percent (in capacity, 27.1 percent) and in sausage products production, 6.5 percent (in capacity, 37.8 percent). Many small enterprises, which are poorly equipped technically, are located in the raw material zone of large enterprises. For example, in Vinnitsa Oblast small enterprises--in Gaysin (of a capacity of 15 tons per shift), in Tul'chin (8 tons), in Kazatin (16 tons) and in Bar (15 tons)--are located in the raw material zones of the Vinnitsa and Trostyanets meat combines. In Dnepropetrovsk Oblast meat combines in Zheltyye Vody (13 tons per shift) and Pavlograd (19 tons per shift) are located in the raw material zones of larger enterprises and so forth. Obviously, owing to the predominance of small enterprises, the possibilities of technical progress in the sector are limited, which hampers the growth of labor productivity and of other economic indicators. In a number of the country's rayons meat combines are greatly removed from raw material bases. This necessitates a distant transportation of livestock and is associated with its weight losses. Therefore, of great importance is a review of the dislocation of enterprises in accordance with the principles of production concentration and specialization and with due regard for the shortening of the distances of livestock delivery in a radius of up to 150 km.

For each raw material zone it is necessary to work out a long-term plan for the development of animal husbandry and for the delivery of livestock for slaughtering for the next decade and to determine the raw material resources of enterprises and the required capacity for the slaughtering and processing of livestock and for the production of meat products. In accordance with the planned capacity for the production of meat and meat products, it is necessary to work out long-term plans for the technical retooling of existing and the construction of new enterprises, as well as plans for the liquidation of small, poorly equipped enterprises located in the raw material zones of larger enterprises and not having prospects for development.

To help sectorial management bodies and enterprises in the development of plans for a rise in the technical level of production, scientific research and planning organizations should develop, with respect to each type of enterprise, recommendations for its technical equipment, which contain a list of advanced types of equipment and technological processes.

Plans for the dislocation of enterprises and for the construction of new and reconstruction of existing enterprises developed and coordinated with local bodies should serve as the basis for the general sectorial plan for the technical retooling of the meat industry as a whole and for the determination of the need for equipment, other material resources and capital investments.

In our opinion, ministries of the meat and dairy industry of the Union republics, associations and enterprises should concentrate their attention on the solution of the above-raised problems. Not waiting for directives "from above," every association and enterprise must develop specific proposals and submit them to the bodies for the management of the agroindustrial complex and the sector for consideration.

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AGRICULTURAL MACHINERY AND EQUIPMENT

NEW MINITRACTOR IN PRODUCTION AT KIEV PLANT

Production Operations Described

Moscow IZVESTIYA in Russian 19 Aug 83 p 1

[Article by Ya. Oleynichenko in the column "Reporting from the Scene": "The All-Purpose 'Malysh'"]

[Text] Experts at the Kiev plant imeni Lense are turning out a new minitractor. In its technical documentation, the motorized unit has been "christened" the MTZ-0.5[Minsk tractor plant]. It has been designed for use in gardening and truck-farming, hothouse operations, and the cultivation of private plots.

We roll the vehicle out the plant door and start the engine. I take to the controls and "drive" the minitractor. I have shifted into higher speed.

"Don't speed", laughs A. Nevshupa, the plant's assistant chief production engineer. "You're right up to the limit now--beyond 9 kilometers per hour". It was designed for load hauling. One need only attach a specialized trailer to the motorized unit.

The unit is capable of operating with an attached plow, cultivator, hiller or harrow, mower or potato digger, depending on particular requirements. The machine can completely cultivate an area of .12 hectare, or mow a .29 hectare-size lawn in the space of one hour. The fuel tank, which holds up to 6 liters of A-72 or A-76 gasoline, is sufficient for 6-7 hours of operation...

How is the production of this innovative product, eagerly awaited by consumers, progressing at the plant? I put this question to the head of the engineering laboratory, A. Sandugey.

"The Melitopol motor works and the Ternopol combine will take part in the development of the first Ukrainian-produced minitractor. The Kamenets-Podol'skiy agricequipment plant has undertaken manufacture of the harrows and cultivators, and the Kirovograd 'Red Star' is developing a universal mini-planter.

"We have finished the first test run of transmissions, which we forwarded to the Minsk tractor plant. Our Belorussian colleagues have successfully produced a similar motorized unit of proven reliability. We have concluded negotiations for a joint venture: the Kiev people will supply the transmissions, and the Belorussians will furnish us with the other necessary components. With help from Minsk, we expect to release the first run of motorized units as early as this year.

Features for Private Plots

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 2 Nov 83 p 1

[Article by O. Glebov: "Minitractor Launched"]

[Text] At first, the whole thing seems rather extraordinary: a midget tractor weighing all of 135 kilograms is easily pulling a trailer on which more than half of a ton has been loaded. But if a plow is attached--a tiller, a harrow or cultivator--as one would expect, it works the garden. The machine has been programed for everything: it can plant and dig potatoes, water the garden, operate on any terrain--even in a ravine. Within something like an hour, it will fly through 12 one-hundredths of a truck garden or cut 29 one-hundredths of a meadow. And this is not an advertising claim, but verifiable fact.

Under the watchful gaze of the head of the engineering laboratory, A. Sandugey, I steer the minitractor, brand new and reeking of fresh paint, out into the plant's back lot. Upshifting the speed control, I set out for a drive.

"A real dare-devil," laughs the assistant chief production engineer, A. Nevshupa. From wont of practice, I had selected the highest speed--9 kilometers per hour, while the normal operating speed is lower.

But I soon came to the realization that speeding about in high enthusiasm is not the proper approach. The tractor is small, but concerns about it are many. There are about 300 individual components. In order to manufacture only those of them that will be turned out here, at the Plant imeni Lense, 700 nomenclatures of equipment and instrumentation are required. Meanwhile, the collective has undertaken short-term adjustments of the assembly line production of the minitractors.

"We ourselves would not have been able to turn out a test run during these months," says A. Nevshupa, "if it had not been for the help of the Minsk tractor design engineers--the creators of the new machine."

This help comes in various forms--components as well as consulting specialists.

The Kievans also are experiencing a speed-up--production planning is proceeding at a rapid pace here. Engineering processes have already been worked out for the machining of assembly components, as well as for painting and corrosion proofing. Areas have been marked off for the installation of equipment. At weekly conferences devoted to new technology presided over by the general director, V. Zlobin, the minitractor, or, as it is officially termed, the "MTZ-0.5"

motorized unit, is the number one topic of discussion. The question of its production has been brought before a meeting of the party committee. A chart depicting the results of the implementation of organizational and technological measures is very closely monitored. It is understood by all that there is a great need for this machine, and consequently, there is great desire to respond to the needs of the people, not with promises, but with action.

In addition to the Plant imeni Lapse , a great many other firms are participating in the successful production of the new tractor.

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AGRICULTURAL MACHINERY AND EQUIPMENT

PROBLEMS IN MAINTENANCE, REPAIR WORK DISCUSSED

Saratov STEPNIYE PROSTORY in Russian No 9, Sep 83 pp 4-6

/Article by B.A. Kasimovskiy, deputy chairman of RSFSR Goskomsel'khoshtekhnika and Candidate of Technical Sciences: "Problems of Agriculture's Chief Partner"/

/Text/ The successful carrying out of measures aimed at implementing the Food Program is unthinkable in the absence of efficient and harmonious work by all elements of the agroindustrial complex, one partner of which is RSFSR Goskomsel'khoshtekhnika. Its role consists mainly of carrying out efficient and timely deliveries of machines to specific farms and providing training to machine operators in the maintenance and use of new equipment and also in organizing the production of certain needed machines, mechanisms and devices.

Interesting experience has been accumulated in Stavropol Kray. Last year the following items of equipment were either produced or re-equipped: 500 large hay wagons and 463 toothless drag harrows for powerful tractors, 657 harvesters with general-purpose rakes for the harvesting of lodged graincrops, 93 SK-5 combines for harvesting corn for grain and so forth. This made it possible to raise the productivity of the machine-tractor pool and to lower labor expenditures by up to 30 percent.

An increase in the level of mechanization of agricultural production is inseparable associated with the further introduction at kolkhozes and sovkhozes of industrial technologies for the cultivation of sugar beets, soybeans, sunflowers, potatoes, corn for grain and vegetables. The mastering of new methods has already been in progress for 4 years. This year almost all of the grain corn on farms throughout the republic is being grown using the new technology, soybeans -- 85 percent, sugar beets -- 43 percent and sunflowers -- on 23 percent of the areas. The conversion over to an industrial technology for the cultivation of potatoes (4 percent) is proceeding slowly.

Positive experience in mastering the technology for sugar beet cultivation is to be found in Voronezh Oblast. Approximately 2,000 root cleaners and 1,600 sweeper harrows have been produced here. In all, 3.6 million rubles worth of equipment have been produced. The workers in Voronezh Oblast were some of the first to master the technological process for hermetically sealing the bodies of trucks using foam-polyurethane. The following items of equipment are being introduced into operations in Kursk Oblast: non-coupling triple-sowing machine

units, beet loaders produced at the site, toxic chemical mixers, sugar beet ridgers and cultivator devices for applying ammonia liquor. A hydraulic device for the opening and closing of the sides of tractor trailers is being employed extensively. Over a period of 2 years, 3,500 kits for use with grain harvesting combines in the harvesting of lodged grain crops have been produced. Many valuable and useful developments have been introduced into operations on farms through the efforts of Saratov oblsel'khoztekhnika and others.

It is known that a great amount of manual labor is being employed in the cultivation of vegetables at the present time. The conversion over to the use of industrial technologies for these labor-intensive crops is lowering labor expenditures noticeably. In Saratov Oblast, for example, they have decreased in the case of carrot cultivation from 7.86 to 4.2 manhours per hectare, or by almost twofold. The production costs for the products have also decreased.

The program for the technical re-equipping of agriculture throughout the country calls not only for an increase in the delivery volumes for new machines and improvements in their quality, but also for large-scale measures aimed at improving the organization of equipment usage and also the servicing and repair of equipment.

Unfortunately, by no means is full use being made of the technical potential embodied in the agricultural machines. In a number of regions throughout the country, the daily output per tractor or grain harvesting combine does not exceed 75-80 percent of the norm. Notwithstanding a stable trend towards an annual reduction in specific expenditures for equipment maintenance, with regard to its balance value, these expenditures still continue to remain high. The total amount of absolute expenditures for the repair and operation of the machine-tractor pool are increasing from year to year and already are being expressed in terms of several billions of rubles.

The utilization of large capital investments for the technical re-equipping of agriculture requires that the greatest return be realized from use of the machine-tractor pool. Each machine being delivered to a farm must promote growth in labor productivity and an improvement in the productivity of the fields and farms.

In order to solve these tasks, it is necessary first of all to improve the technical servicing of the agricultural equipment, a component part of which is the high quality restoration of worn out parts. Experience testifies to the fact that only 20 percent of the parts of tractors undergoing capital repair can be discarded completely and that 20-45 percent are suitable for further operation. The service life for the remaining parts can be extended. Such a ratio is typical of many types of machines. Hence, approximately one half of all parts are suitable for repair.

In the process involving the restoration of worn out parts, the number of production operations is reduced by a factor of 5-6 compared to the production of new ones. As a rule, the production costs do not exceed 60-70 percent of the prices for new parts.

At the present time, the proportion of restored parts at many repair enterprises of Sel'khoztekhnika constitutes 40 percent of the overall volume of spare parts. The restoration of parts, which makes it possible to realize savings in labor, metal and other expenditures, is a many-sided problem. It is inter-departmental in nature and the solution for it is based upon joint and comprehensive works by the branch institutes and the leading practice of repair enterprises.

Within the USSR Goskomsel'khoztekhnika System, a general plan is being carried out for developing production operations in connection with the restoration of worn out parts up to 1990. The chief trend in the development of this branch is the creation of large-scale specialized enterprises and departments, equipping them with highly accurate and highly productive equipment, introducing mechanized production lines and making extensive use of the most effective methods for restoring parts. According to estimates by specialists, more than 20 percent of the overall volume of part restoration work can be carried out on mechanized production lines. The restoration of parts, similar to any engineering endeavor, cannot tolerate either oversimplification or amateurish work. The technology must be based upon the use of modern scientific-technical achievements.

At the present time, welding and fusion methods for the restoration of parts are being employed most extensively. In the opinion of scientists and specialists, these methods will predominate and in future years the task will be one of mechanizing and developing these processes to the maximum possible degree.

In collaboration with the Yaroslavl Motor Plant, new lines have been introduced for the restoration of crankshafts for YaMZ-240 engines. With the aid of specialists from the Altayskiy Motor Plant, a technology has been developed for restoring the crankshafts of A-41 and A-01 engines. A number of developments have been introduced based upon work carried out at branch laboratories and other organizations: plasma surfacing of pistons made out of aluminum alloys, contact welding of powder, contact welding of a belt to a shaft, restoration of parts using plastic deformation and so forth.

For developing and introducing a technology for restoring the links of a DT-75 caterpillar track, a group of workers attached to Goskomsel'khoztekhnika was awarded the Prize of the USSR Council of Ministers for 1983.

At raysel'khoztekhnika's and at plants, technical servicing stations and installation organizations and at bases, warehouses and motor vehicle establishments, work is constantly being carried out in connection with developing production operations, raising its technical level and the quality of the products being produced and improving production-technical support for agriculture.

The work of introducing new equipment has been organized well in the Saratov, Orel, Ryazan, Tula, Novosibirsk and Vologda obsel'khoztekhnika's and also in the Stavropol Krayssel'khoztekhnika. These associations are fulfilling the plan for the principal indicator -- economic effect. Many new innovations are being introduced into operations by the Leningrad, Kursk, Voronezh, Sverdlovsk, Amur and other obl'sel'khoztekhnika's.

However, a number of associations are not coping with the plan. This includes the Gorkiy, Ulyanovsk, Chelyabinsk and Tatar ASSR associations. Here there is a shortage of specialists familiar with the new equipment. Quite often the measures for technical progress are planned without taking into account the economic effect and the expenditures required for introducing them into operations. RSFSR Goskomsel'khoztekhnika is receiving very few recommendations for awarding bonuses to enterprises and organizations. And this is a very important work indicator. No recommendations -- no work.

In discussing backward associations, special mention should be made regarding the reduction in the number of senior engineers for new equipment at the raysel'khoztekhnika's. Some leaders, failing to understand the essence of the problems concerned with technical progress under the new conditions and having received our instruction concerning a reduction in staff, transferred the functions of new equipment specialists over to engineers for equipment under warranty. This is what happened in Ulyanovsk and Gorkiy Oblasts and in the Tatar and Bashkir ASSR's. This mistake must be corrected by restoring the position of senior engineer for new equipment. Under present conditions, the failure to have an intelligent specialist of this profile within each raysel'khoztekhnika is the same as working with no good prospects for the future. And an engineer for equipment under warranty has frequent dealings with new machines, which still contain defects upon leaving the plant production lines. The combining of these two positions will inevitably result in a disruption in the plan for scientific-technical progress and prolonged periods of idle time for equipment under warranty.

In repair production operations, technical progress calls mainly for the introduction of mechanized lines. The number of such lines is increasing with each passing year. They are raising the productivity and culture of labor and the quality of the repair work. Last year, 48 percent of the tractors, almost one half of the combines and 86 percent of the motor vehicles and tractor and combine engines were repaired on these lines and by the end of the five-year plan there will be more than 1,200 such lines in the system. However, there have been incidents of the lines being turned over for operation while still incomplete.

Earlier the party and government devoted a great amount of attention to the development of efficiency and inventive work. On 20 August 1973, the CPSU Central Committee and the USSR Council of Ministers adopted the decree entitled "Further Development of Inventive Work Throughout the Country and Improvements in the Use of Discoveries, Inventions and Efficiency Proposals in the National Economy and in Raising Their Role in Accelerating Scientific-Technical Progress." During this same year the USSR Council of Ministers approved the new "Statute on Discoveries, Inventions and Efficiency Proposals."

The inventors and efficiency experts of the RSFSR Goskomsel'khoztekhnika have made a worthy contribution towards carrying out the tasks assigned by the 26th CPSU Congress. The principal indicator -- realizing an economic effect from the use of inventions and efficiency proposals -- was fulfilled by 111 percent, that is, it amounted to 23.1 million rubles against a plan calling for 20.7 million rubles. The return per ruble expended was in excess of 8 rubles. There are 35,600 efficiency experts and inventors working for the RSFSR Goskomsel'khoztekhnika.

For the development, examination and introduction of efficiency proposals in the associations, more than 50 experimental sectors have been created for developing and producing experimental models for the more valuable inventions and efficiency proposals. For example, in the Tatar ASSR an experimental sector attached to the Kazan Motor Vehicle Repair Plant produces experimental models of harvesters having rotary rippers, based upon a patent belonging to a group of inventors. In the Sovetskiy Branch of the Tula oblsel'khoztekhnika, a similar sector engaged in performing work on the proposals of efficiency experts and inventors realized an economic effect of 4,800 rubles in 1982.

There are 17 honored efficiency experts of the RSFSR working at enterprises and organizations of Goskomsel'khoztekhnika and 269 individuals bear the title of "Best Efficiency Expert of USSR Goskomsel'khoztekhnika."

An important invention has been introduced at the Saratov oblsel'khoztekhnika for the restoration of friction disks for the K-700 tractor, with use being made of a chemical-thermal method and a special compound. This invention produces an annual economic effect of 250,000 rubles. In 1983, this proposal resulted in 600,000 disks being returned to operations, with the products being shipped to 37 oblasts, krais and autonomous republics and also to other union republics. The production cost for restoring a disk is 48 kopecks and the price for a new one -- 5.20 rubles.

In those areas where proper attention is not being given to the problems concerned with the development of efficiency and inventive work, the indicators are extremely low. The 1982 task for realizing an economic effect from the introduction of inventions and efficiency proposals was fulfilled by the Gorkiy and Volgograd oblsel'khoztekhnika's by only 32 percent.

One reason for the low operational indicators in the development of new innovations is the weak work being carried out in connection with planning the use of proposals and also their selection and introduction into operations on an extensive scale. The leaders of enterprises and organizations are not devoting adequate attention to the carrying out of inspections and competitions organizing exhibits dealing with inventions and efficiency proposals or composing thematic plans on production bottlenecks and other organizational measures.

Important work is being carried out in the associations in connection with the restoration of new equipment that is still under a production plant warranty.

A network of support bases for the plants has been created and business-like collaboration organized with them. As a result, a trend has been observed towards reducing the quantities of equipment that is defective and yet still under warranty.

Today one out of every four K-700 and T-150K tractors, 28 percent of the grain harvesting combines and more than one half of the beet harvesting and feed harvesting machines are operating under plant warranties. In all, there are approximately 200,000 units of equipment under warranty for all types of equipment. According to data submitted for the first 6 months of 1982, the following types and quantities of equipment were defective: 565 powerful

tractors, 720 KSK-100 and KPS-5G machines (7 percent), 29,500 grain harvesting combines (approximately 2 percent) and also 670 beet machines (approximately 4 percent of those under warranty).

What is preventing the rapid restoration of this equipment? The data obtained indicates that in those instances where the fault of a plant is recognized (and this covers roughly one third of all machines which break down), the restoration work is carried out relatively quickly. But equipment which broke down owing to fault on the part of farms is doomed to lie idle for extended periods of time. In such instances, a very important role is played by our engineer for equipment under warranty. Everything depends upon his work in solving a specific problem. Each day of idle time for a machine increases the degree of loss to a farm.

Purposeful scientific-technical information, propaganda and advertising must promote the carrying out of the decisions handed down during the May and November Plenums of the CPSU Central Committee and practical interaction with the kolkhozes and sovkhoses and with all branches of the agroindustrial complex in striving to increase the output of field crop husbandry and animal husbandry.

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AGRICULTURAL MACHINERY AND EQUIPMENT

EQUIPMENT PREPARATIONS FOR SPRING FIELD WORK

Moscow SOVETSKAYA ROSSIYA in Russian 26 Oct 83 p 1

/Article: "In the RSFSR Council of Ministers"/

/Text/ The Presidium of the RSFSR Council of Ministers has adopted a decree calling for the timely and high quality preparation of the machine-tractor pool of kolkhozes and sovkhozes for the 1984 spring field operations. In the decree, mention is made of the fact that improvements have been achieved recently in the use of the equipment and yet many shortcomings still persist with regard to organizing repair operations for the machines. Last spring, from 10 to 30 percent of the tractors were not prepared for moving out onto the fields in Novgorod, Kostroma, Kirov, Tomsk and Irkutsk Oblasts, many powerful K-700 and T-150K tractors lay idle and in many oblasts delays were tolerated in placing grain harvesting and especially silage harvesting combines in operation.

For the forthcoming season, the task has been assigned of organizing the repair operations in a manner such that the principal bulk of the agricultural equipment will be placed in working condition during the autumn and winter period, the sowing and soil-tilling machines -- no later than 1 January and the grain harvesting combines and hay harvesting machines -- by the commencement of field operations and the potato harvesting and beet harvesting combines -- by 1 July 1984. Special attention has been given to the need for introducing scientific achievements and leading practice into operations in a more energetic manner and to making more extensive use of cost accounting procedures and collective contracts. The ASSR goskomsel'khoztekhnika's and the kray and oblast sel'khoztekhnika's must expand the nomenclature and volumes of restored spare parts and make them available for sale to the kolkhozes and sovkhozes as marketable products.

During this same meeting, the Presidium of the RSFSR Council of Ministers approved the initiative displayed by machine operators in the Mary ASSR and Orenburg Oblast, who undertook the obligation of completing repairs on their agricultural equipment considerably earlier than the periods established for the republic as a whole. For example, the plans call for the grain harvesting combines and irrigation equipment to be placed in operation prior to 1 April and the feed procurement machines -- prior to 1 May. In connection with its plan for launching a socialist competition for the timely and high quality

preparation of the machine-tractor pool, the Presidium of the RSFSR Council of Ministers has in particular requested the organization of double-shift operations for the enterprises of sel'khoztekhnika. In addition, it has asked that the kolkhozes and sovkhozes be supplied with skilled machine operator personnel for the double-shift operation of equipment.

7046

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FORESTRY AND TIMBER

LAGGING TIMBER PROCUREMENT MATTER OF CONCERN

Moscow AGITATOR in Russian No 17, Sep 83 pp 28-29

/Article by V. Tatarinov, chief of the Department of Timber Industry and Forestry of USSR Gosplan: "Responsibility of Forestry Workers"/

/Text/ Since 1970, the output of the forestry, wood-working and pulp and paper industry of our country has increased by a factor of more than 1.5. The production of fiber board panels has increased by a factor of 2.3, chip board -- by 3, paper -- by a factor of 1.3, including newspaper -- by 44 percent and cardboard -- by 39 percent and furniture -- by more than twofold. However, the development of the branch and especially the production of lumber badly needed for the national economy has already been held up for a number of years owing to a reduction in wood procurements.

Here is some data in this regard: during the 8th and 9th Five-Year Plans, owing to the placing in operation of a number of new lumber industry farms and supplying the timber procurement specialists with new equipment, the production of lumber increased by 39 million cubic meters and in 1975 reached 310 million cubic meters. But subsequently, during the 10th Five-Year Plan, it decreased by 35 million cubic meters and during 1981-1982 -- by three more million cubic meters. In 1982, the enterprises of USSR Minlesbumprom /Ministry of the Timber, Pulp and Paper and Wood Processing Industry/ furnished almost 23 million cubic meters less of lumber than the figure called for in the plan.

This year the level of wood procurements has stabilized, but it is still not increasing and the plan for wood shipments, just as in the past, is not being fulfilled. This is causing great harm to the national economy. The lumber requirements of the sawmill, pulp and paper, mining industries, agriculture and transport are systematically not being satisfied. As a result of serious interruptions in timber deliveries, the erection of housing for construction purposes is being dragged out.

Naturally, such a situation is unacceptable and has been a source of considerable concern for some time. At the end of last year the leading organs called for large-scale additional measures aimed at ensuring that the timber procurement enterprises were properly supplied with modern equipment and material resources.

At the present time, the enterprises of Minlesbumprom have adequate supplies of fine equipment at their disposal. If utilized in an intelligent and intensive manner, this equipment will make it possible to increase the wood procurements considerably and at the same time it will release a large number of workers from having to perform heavy manual labor.

But it is unfortunate that this effective and by no means cheap equipment is not being utilized at its full capability and is producing only a limited return. Here are just two examples. Last year, LP-18A non-choker-skidding machines were utilized an average of only 131 days throughout the ministry and at timber industry farms of Sverdlesprom -- 159 days. Certainly, this indicator is not very high and yet if it was achieved in all areas the pool of machines would be able to carry out 8 million more cubic meters of skidding work without the use of manual labor. Tree trimming machines were employed an average of only 147 days throughout the branch and at the Karellesprom Association -- 169. If this not too high indicator was achieved by all of the country's timber industry farms, it would be possible to reduce the volume of manual tree trimming work by more than six million cubic meters and thus release approximately 3,000 workers from having to perform this operation.

The experience of many leading machine operators and drivers reveals that by strictly observing the rules for equipment operation and performing one's tasks in a diligent and conscientious manner, it is possible even to exceed even the planned productivity for the units. Thus, last year more than 100 machine operators had an annual output for their cutting-stacking LP-19 machines of more than 40,000 cubic meters, 20 machine operators -- more than 50,000 and machine operator M. Baskova at the Turmanskii Timber Industry Farm in Irkutsk Oblast -- approximately 70,000 cubic meters.

The high potential possessed by felling-skidding machines is borne out by the experience accumulated in their use at the Pinchugskiy Timber Industry Farm in Krasnoyarsk Kray, where their average annual output was 19,000 cubic meters. The average indicator for the branch was considerably lower.

A similar picture emerges with regard to the use of self-propelled tree trimming machines, each of which replaces 6-8 workers. Last year, in the Karelian ASSR, machine operator G. Smirnov raised the output for such a machine to 37,600 cubic meters, Hero of Socialist Labor P. D'yakonov -- to 39,000 and for USSR Minlesbumprom as a whole it amounted to less than 15,000 cubic meters. These then are visible and real reserves.

Great results may be realized from the extensive development of new and proven technologies. This includes, for example, the skidding of trees using non-choker tractors not by the butt ends, as has been the tradition, but rather by the tops. This increases the workload per trip, the cross country capability of a tractor is improved and seedling growth sustains less damage. At timber industry farms in Arkhangelsk Oblast, an interesting method has been introduced for employing self-propelled tree trimming machines for the trimming of branches, with simultaneous sorting of the tree length logs by strains, partial removal of the bark from them when preparing for rafting, trimming the butt ends and stacking the branches and twigs for portage purposes. In the process, the productivity of the machines is raised by almost one third.

A priority task of the timber procurement specialists is that of raising the proportion of lumber obtained from their overall procurements. At the present time, the situation is just the reverse -- the yield of round lumber from the overall volume of wood shipments decreased from 75 percent in 1975 to 69 percent in 1982. There are many reasons for this: the technology is not followed, tree length logs are spoiled due to careless tractor operations, they are not cut and sorted in the correct manner and a portion of the valuable types of wood is used unjustifiably for firewood. A reduction in the yield of round timber also occurs owing to the untimely preparation of the tree length logs added to the inter-seasonal supplies. Quite often they lie around for several years, after which at the very best they are suitable only for firewood. Such losses are unacceptable.

There are many examples available for the timber procurement specialists to follow. Within the branch there are many leading collectives and production innovators who have proven their worth by implementing creative improvements in the technology and labor organization and in the skilful use of equipment.

Each working moment in behalf of the task -- such is the slogan of the brigade headed by the recipient of the USSR State Prize A. Vatrassov at the Komsomol'sk Timber Industry Farm in Tyumen Oblast. The production cost for a cubic meter of wood by this collective is the lowest in the association. At this same timber industry farm, the consolidated brigade of Hero of Socialist Labor P. Popov is successfully overfulfilling its tasks. This year it undertook the task of procuring 250,000 cubic meters of wood. Here, at the Komsomolsk Timber Industry Farm and also at the Olenino Timber Industry Farm in Kalinin Oblast and at the Sergeyevka and Tymsk Timber Industry Farms of the Dal'lesprom Association, all-round cross-cutting and loading brigades have proven their worth at lower timber yards. Working in behalf of one order and with payment based upon the final result -- the shipment, they are employing mutual assistance and interchangeability on an extensive scale, they are utilizing each moment of time in an intelligent manner and they have achieved considerable increases in labor productivity and in the yield of lumber.

The study and dissemination of progressive initiatives which have developed within the branch and also the leading experience that has been accumulated here would make it possible to bring about radical improvements in the status of affairs and increase considerably the volume of timber procurements. Certainly, this is primarily a concern of the leaders of all ranks and yet much depends upon the work carried out by rank and file forestry workers -- upon their qualifications and experience and upon their ability and readiness to employ boldly and intelligently new equipment, technology and production organization and new work methods which initially are unfamiliar but which hold the promise of good results.

For the sake of fairness it must be stated that the machine builders must accept a considerably amount of responsibility for the lag in timber procurements. With regard to the equipment required for the complete mechanization of operations on the wood lots and in the lumber yards, they are still producing fewer units than the number required. Many of the machines being made available for forestry work are not sufficiently reliable and quickly break down. In combination with systematic non-deliveries of spare

parts and units and also a low technical level for the repair base, the end result is machines which determine the tempo of the timber procurement work lying idle undergoing repairs or awaiting repairs for an average of more than 100 days annually and VM-4 stacking machines -- as much as 194 days.

Properly speaking, herein lies the chief reasons for the lag in timber procurements. The period when this work was carried out by a great number of people equipped at best with simple power saws and tractors has receded irrevocably into the past. Today the plans must be carried out with a considerably fewer number of people using powerful equipment. But even this equipment quite often fails to do the job and at times the timber procurement specialists do not use it in an intelligent or thrifty manner. Hence the chief task consists of improving substantially the quality of the machines being employed in the forests, creating a repair base in keeping with today's requirements, raising the skills of the personnel, strengthening technological and labor discipline in the collectives of timber procurement specialists and restoring proper order in all areas.

Order is still lacking in the organization of wood shipments and the construction of reliable year-round logging roads has fallen behind. The branch's requirements in this regard have been satisfied by less than 60 percent, with more than 40 percent consisting of many thousands of dirt and winter roads which are completely dependent upon the weather conditions and which are unsuitable for wood shipments for a considerable period of time. In order to correct this situation, 9,000-10,000 kilometers of permanent logging roads must be built annually, that is, one and a half times more than the present figure.

The timber procurement specialists complain regarding a shortage of road construction equipment. To a certain extent, they are correct. However, checks have revealed that very poor use is being made of the machines that are available -- even during the summer months, as a rule only one third of the bulldozers and one half of the dump trucks and powered graders are being used for the construction and repair of roads, with their coefficient of shift work being just slightly more than one. In the case of a number of associations, very poor use is being made of narrow gauge railroads for the transporting of timber. Just as in previous years, the plans for the river rafting of wood are not being fulfilled. In short, a requirement exists here for a radical change for the better. Under present conditions, the cutting down of the required number of trees does not constitute a problem. But in the forests themselves, there is nobody who needs the tree length logs and at times they accumulate over the years in the manner of "memorials" to somebody's mismanagement.

The Soviet State is displaying concern for the forestry workers and is allocating considerable resources for improving their working and living conditions. Last year the plan for placing housing units in operation was fulfilled at all of the timber procurement associations. The branch's plan for building children's pre-school institutes, polyclinics and professional-technical institutes was also fulfilled. But a great deal of work still remains to be carried out if proper living and cultural conditions are to be created for the lumber jacks in all areas. And this work must be carried out in order to lower the as yet too high turnover in manpower and also to solve the

complicated and very important problem of creating permanent and highly skilled cadres of personnel. These personnel should be capable of overcoming the branch's extended backwardness and achieving improvements in the procurements of wood.

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USSR Report

AGRICULTURE

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27 December 1983

USSR REPORT

AGRICULTURE

No. 1415

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MAJOR CROP PROGRESS AND WEATHER REPORTING

TASKS OF SUGAR BEET GROWERS IN NON-CHERNOZEM ZONE

Moscow ZAKUPKI SEL'SKOKHOZYAYSTVENNYKH PRODUKTOV in Russian No 7, Jul 83 pp 10-12

[Article by M. Bessonov, deputy chief of the state inspectorate for procurement of industrial crops of the Ministry of Procurement RSFSR, under the rubric "Components of the Food Program": "Essential Concerns of Beet Growers in the Non-Chernozem Zone"]

[Text] The April 1983 meeting of the CPSU Central Committee pointed out the necessity of insuring stability of crop farming and significantly raising its productivity. This demand applies completely to increasing production and procurement of sugar beets also.

Sugar beets have been raised in the Non-Chernozem Zone since long ago. The first sugar refinery was started in the town of Alyabevo in Tula Province in 1802. It produced 120 poods of white sugar. At the present time production of sugar beets -- the basic raw material for making sugar -- is concentrated in Orel, Ryazan, Tula, Bryansk, and Gorky oblasts and in the Mordovian ASSR. In this zone 795 kolkhozes and sovkhoses are engaged in their cultivation. Twelve sugar mills with a capacity to process more than 22,000 tons of beets a day operate here.

By the end of the five-year plan kolkhozes and sovkhoses of the Non-Chernozem Zone are expected to sell 2,490,000 tons of sugar beets to the state, from which about 250,000 tons of sugar must be produced.

The task put before agricultural and procurement organs, as we see, is an important one. In the first three years of the current five-year plan production and procurement of sugar beets must be significantly increased in comparison to the actual level achieved; quality of output procured must be improved; and in addition, yield from each hectare of beet producing fields must be raised.

The state allocates significant material resources for development of beet cultivation and raising the economy of beet growing farms. Beginning in 1983 higher state purchase prices for sugar beets and supplements to purchase prices for agricultural output sold to the state by low-profit and planned-loss kolkhozes and sovkhoses have been in effect. A 50 percent supplement to the purchase price is paid to farms for sugar beets sold to the state at an average level higher than what was attained in the 10th Five-Year Plan. Norms of sale

of sugar to beet growers at privileged prices, a bonus system of payment to management personnel and specialists from kolkhozes and sovkhozes, and other economic stimuluses have been developed.

Mineral fertilizers, toxic chemicals, planters, cultivators, sets of six- and four-row harvesters, beet loaders, and other equipment for cultivation, harvesting, and hauling sugar beets are allocated to beet growers of the Non-Chernozem Zone in quantities which increase every year.

Nevertheless, despite this help on the part of the state, farms of the Non-Chernozem Zone did not fulfill plans for production and procurement of sugar beets in the 10th Five-Year Plan nor in 1982. For example, farms in Ryazan Oblast fulfilled only 77 percent of the plan assignment for sugar beets in the 10th Five-Year Plan and 90 percent in 1982, while corresponding figures for other places are: Mordovian ASSR -- 77 and 89; Bryansk Oblast -- 77 and 78; Tula Oblast -- 55 and 82; Orel -- 40 and 55; and Gorky -- 49 and 39 percent.

Nevertheless, one should say that in all these oblasts of the Non-Chernozem Zone the possibility exists to grow high and stable yields of sugar beets and to fulfill plans for their sale to the state. This is illustrated by results of the work of certain rayons and farms in this zone where, thanks to well-organized labor and skillful utilization of the whole set of scientific farming practices with introduction of scientific achievements and progressive know-how, farms achieve high and stable yields of sugar beets and overfulfill plans for their procurement. For example, in Pronskiy Rayon of Ryazan Oblast specialization and concentration of the production of sugar beets was carried out. Four farms in the rayon which were close to the processing point began to cultivate them. On the whole the plan for purchasing this output was fulfilled by 114 percent in the last five-year plan and by 108 percent in the first two years of the current one. In seven years these farms of the rayon sold 96,000 tons of sugar beets to the state.

Laborers of Starozhilovskiy Rayon in this oblast, Novomoskovskiy Rayon in Tula Oblast, Atyashevskiy Rayon in the Mordovian ASSR, and a number of others achieved notable successes in production and procurement of sugar beets.

The Kolkhoz imeni Lenin in Novomoskovskiy Rayon of Tula Oblast organized work on fulfilling plans for purchase of sugar beets in an exemplary manner. For many years it has fulfilled negotiated advance contracts and sells about 8,000 tons of sugar beets to the state every year. The Kolkhoz imeni Gorky in Atyashevskiy Rayon of the Mordovian ASSR sold 11,172 tons of sugar beets (139 percent of the plan) yearly in the 10th Five-Year Plan and in 1982 this farm sold 14,250 tons of beets to the state while the plan called for 9,050 tons (157 percent of the plan).

In the last seven years the Kolkhoz imeni Chapayev in Mikhaylovskiy Rayon of Ryazan Oblast, the Soyuz Sovkhoz in Sevskiy Rayon of Bryansk Oblast, and others have been consistently fulfilling plans for procurement. But unfortunately, there are few of these examples. And it is not accidental, therefore, that in the last five-year plan farms in the Non-Chernozem Zone delivered upwards of 7 million tons of sugar beets less than planned, and were 1,422,000 tons short

in 1981-1982. An especially large number of the kolkhozes and sovkhoses which did not fulfill the plan for sale of sugar beets to the state are in Gorky and Bryansk oblasts.

Ichalkovskiy Rayon in the Mordovian ASSR fulfilled the plan for purchase of sugar beets by 64 percent in the 1st Five-Year Plan, 41 percent in 1981, and 53 percent in 1982. In 1982 only three of 17 farms which raise sugar beets fulfilled the plan while 11 kolkhozes and sovkhoses have not fulfilled the established state assignment once in the last seven years. The Mikhaylovskiy Sovkhoz of Kurkinskiy Rayon in Tula Oblast has not fulfilled the plan for purchases once in the last seven years either. In 1982 this farm sold only 1,174 tons (34 percent) while the plan called for 3,440 tons.

The table below shows the amount of sugar obtained from each hectare in the Non-Chernozem Zone in recent years.

Sugar Production per Hectare in the Non-Chernozem Zone
(in quintals)

Name of Oblast or ASSR	1976-1980, Average	1981	1982, Preliminary Figures
Bryansk Oblast	9	14.4	10.87
Orel Oblast	6.4	7.5	7.8
Ryazan Oblast	6.9	6.0	7.0
Tula Oblast	8.4	12.7	15.8
Gorky Oblast	5.7	3.1	5.2
Mordovian ASSR	7.9	6.7	7.2

As is apparent from the statistics cited, a notable increase in yield of sugar per hectare is evident in Tula Oblast, while it increased somewhat in Orel and Bryansk oblasts, and decreased in Gorky Oblast and the Mordovian ASSR.

State inspectorates for purchases and quality of agricultural products of rayons, oblasts, and autonomous republics of the Non-Chernozem Zone together with managers of kolkhozes and sovkhoses, agricultural organs and other organizations of the agroindustrial complex must take measures to overcome the lagging which has been permitted in state purchases of sugar beets and look for additional resources of this output in order to not only fulfill the plan-order of the state in 1983 but also to compensate for the underdelivery of output in the past two years of the current five-year plan. In addition, production of sugar from each hectare needs to be increased.

In a number of kolkhozes and sovkhoses of the RSFSR the improper practice of overstating the gross harvest in production-financial plans has taken root. The unrealistic yield, as opposed to actual yield, is not backed up by scientific

farming practices. For example, in 1982 at beet growing farms in Orel Oblast the plan called for a yield of 156 quintals from each hectare of sugar beets whereas the average in the 10th Five-Year Plan and in 1981 was only 75 quintals harvested per hectare. In 1983 the plan for the whole oblast calls for a yield of 161 quintals per hectare, which is almost twice last year's yield. Similar cases occur in a number of farms in Gorky, Bryansk, Tula, and Ryazan oblasts. For example, the Spartak Kolkhoz in Mikhaylovskiy Rayon of Ryazan Oblast planned for a 100-quintal per hectare sugar beet yield in 1983, while in 1976-1980 the yield per hectare averaged 69 and in 1981-1982 it was 43.

This is why state inspectorates which have identified such shortcomings should, together with managers and specialists at the farms and contractors, take proper measures, including scientific farming and organizational ones, when delivering plans to the farms, concluding contracts, and especially when reconciling negotiated contracts, in order to insure that the advance contracts for sugar beets are realistic and feasible.

One reserve for increasing state purchases of sugar beets is raising their "marketability" [percentage of beets reaching market]. Analysis shows that many kolkhozes and sovkhoses fail to deliver significant quantities of raw sugar beets to the state, and state inspectorates have tolerated these cases. In the 10th Five-Year Plan the marketability of sugar beets in the Non-Chernozem Zone decreased by four percent in comparison with the 9th Five-Year Plan, and amounted to 86 percent whereas for all the RSFSR the average was 89 percent.

Marketability at kolkhozes and sovkhoses in Gorky, Orel, and Ryazan oblasts is especially low. The Sovetskaya Rossiya Kolkhoz in Zalogoshchenskiy Rayon of Orel Oblast fulfilled nine percent of its plan for procurement of sugar beets in 1982, and its marketability figure was 55 percent. A number of beet growing farms have begun producing sugar beet crops for livestock feed rather than for the refineries, which had earlier been categorically forbidden. Such a situation in effect "legalizes" the use of industrial beets for livestock feed, and this is difficult to check on. For this reason, state inspectorates of the Non-Chernozem Zone should make a fundamental improvement in their practical work to increase the marketability of sugar beets and raise the figure to 90-92 percent in the coming year.

Ways to raise marketability of sugar beets are commonly known. They are primarily reduction of losses of beets during the harvest, mainly thorough improved harvesting, prompt hauling from kolkhoz and sovkhos fields, and also significant improvement of motor transport work during the shipping of this output. The challenge is to prevent or minimize losses of beets during harvest, transport, storage, and processing, that is, at the junctions between agricultural production and the following stages on the way to the finished product -- sugar.

But unfortunately, losses of sugar beets are still high.

Inspections by personnel of the state procurement inspectorates have established that at many kolkhozes and sovkhoses many sugar beets are left in the ground because of poor quality harvesting work. Often this occurs because of incorrect adjustment of beet harvesters. Many kolkhozes and sovkhoses start the harvest

late and do not fulfill the approved schedules for harvesting. The result is that the whole complex of jobs occurs in difficult weather conditions. In such cases the quality of output leaves much to be desired.

Not all farms have organized collection of sugar beets after the combines and replowing of the harvested areas. In 1982, for example, in Orel, Ryazan, Gorky, and other oblasts of the Non-Chernozem Zone losses of sugar beets were up to 35 quintals per hectare at a number of farms. At the Sovetskaya Rossiya Kolkhoz in Novoderevenkovskiy Rayon of Orel Oblast, for example, losses on a harvested area of 90 hectares (out of 250 hectares to be harvested) amounted to 30-35 quintals per hectare with a yield of 100 quintals on the day of the inspection. They are especially high on the edges of sugar beet fields, that is, on the turning strips, which are usually not marked out.

A serious shortcoming in organizing procurement of this important product and in reducing commodity resources is untimely hauling from kolkhoz and sovkhoz fields.

Every year in a number of rayons and farms of the Non-Chernozem Zone, large quantity of sugar beets are found in uncovered piles and strips in the fields. As a result weight is lost and the quality of the beets declines. Especially large piles of beets in the fields were observed at kolkhozes and sovkhozes in Shatskiy Rayon of Ryazan Oblast. During last year's harvest season, in October, more than 24,000 tons of beets or 76 percent of all those dug up, were found in the fields. At the Shatskiy Sovkhoz of this same rayon, only 176 tons of the 6,280 tons dug up in the same period were sold to the state. Similar cases have occurred in Orel, Tula, and Gorky oblasts.

The basic reasons for the delay in hauling sugar beets in a number of places are unprompt cleaning and preparation of the root for delivery because of poor organization of loading work in the fields and the inability of the kolkhozes and sovkhozes to provide high-productivity SPS-4.2 beet harvesters. At a number of farms motor transport designated for hauling sugar beets was used in other jobs. There were cases where motor transport was idle because of a lack of fuel and lubricants.

All this resulted in the output per vehicle being very low. For example, whereas output per vehicle throughout all of the RSFSR from the first through the third of October 1982 amounted to 11 tons a day, in Gorky and Bryansk oblasts and the Mordovian ASSR it was five tons, in Tula Oblast seven, and in Ryazan Oblast it was eight tons a day.

State inspectorates of beet growing rayons of the Non-Chernozem Zone must intensify control over the quality of harvest work at kolkhozes and sovkhozes and make sure that loading equipment, motor vehicles, and other transport are used in a highly efficient way.

Significant losses of sugar beets occur in the final state of procurement -- during storage at beet-receiving points, because of shortcomings in the preparation of the material-technical base of procurement organizations.

Many beet-receiving points even now are not equipped with essential machinery for weighing and unloading large trucks and do not have paved areas with active ventilation, laboratories, and equipment for receiving sugar beets with consideration of their sugar content. For example, at the Ukholovo, Novomichurinsk, and Aleksandro-Nevskiy beet-receiving points in Ryazan Oblast only 10-15-ton truck scales were operating, and at the Verdovsk, Remizov, Yagodnoye, Korablino, Luzhkovsk, and Khrushchevo beet-receiving points there were no weighing facilities at all.

The condition of the material-technical base of the Verdovsk beet-receiving point in this oblast causes particular concern. This base procures beets from 23 farms in Sarayevskiy Rayon and five farms in Sapozhkovskiy Rayon for a total of advance contracts of 61,000 tons. It does not have its own storage pits, truck scales, loading areas, or railroad spur. Back in 1976 a decision was made to construct a new model beet-receiving point, but at the present time construction has been suspended. The laboratory which was built and the unfinished administration building are becoming unuseable and the truck scales are being taken apart.

Managers of Rosssakharprom [Russian Sugar Industry] of the Ministry of Food Industry RSFSR know about this, but they are taking no measures. It is essential to do everything to insure that the beet-receiving point begins to operate in 1983.

In Tula Oblast only two of the 11 beet-receiving points have paved areas with active ventilation. Approximately the same situation exists in the Mordovian ASSR also. There are other cases of poor management as well. For example, at the beet-receiving point attached to the Lopandino sugar mill in Bryansk Oblast, the existing 12 ventilating units have not been installed for three years. Significant shortcomings in preparation of the material-technical base were noted in the work of beet-receiving points in Gorky Oblast and in the Mordovian ASSR.

State inspectorates in the rayons of the Non-Chernozem Zone, together with agricultural organs and procurement organizations, must take measures to regulate raw materials zones and to bring sugar beet crops closer to the sugar mills. In order to reduce the hauling of beets and cut the time it takes to remove them from the fields, where necessary, questions of the organization of temporary beet-receiving points near railroad stations and paved roads must be resolved before the harvest begins. Control must be exercised over the building in 1983 of mechanized warehouses and paved areas with active ventilation. In addition, weighing facilities and unloading equipment for beets being delivered by train and in large-capacity trucks must be prepared in time.

We must conduct a decisive battle against sugar beet losses at all stages of production and procurement, reveal cases of losses promptly, and introduce practical suggestions to eliminate shortcomings noted which reduce the marketability of raw beet resources.

We must devote particular attention to controlling accuracy of accounts with kolkhozes and sovkhoses for output delivered in connection with the increase in state purchase prices; payment of the 50 percent supplement to state purchase prices for sugar beets to the state beyond the average level achieved in the 10th Five-Year Plan; and of other accounts.

Strict control is needed over the quality of sugar beets delivered by kolkhozes and sovkhoses and over the accuracy of receiving and determination of quality indicators of the raw beets at beet-receiving points.

All farms and procurement organizations must take active measures for overcoming lags in fulfilling plans for procurement of sugar beets. It is essential to step up organizational work on finding additional resources of this output in order to obtain as much sugar as possible from each hectare of beet fields in the Non-Chernozem Zone and to make a worthy contribution to the Food Program.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

EFFICIENT PREPARATION FOR SUGAR BEET HARVESTING URGED

Kiev PRAVDA UKRAINY in Russian 10 Aug 83 p 1

/Article: "Sugar Beet Harvesting Campaign"/

/Text/ Labor intensity is now high in the republic's fields. After the conclusion of the harvesting and threshing of early grain crops soil is being prepared for the future harvest, hay is being accumulated everywhere and many southern farms are harvesting corn for silage. The day when the harvesting campaign will begin on sugar beet plantations is not far off.

This year our main industrial crop is to be harvested from an area of 1,727 million hectares. A total of 50 million tons of raw materials (in standard weight) are to be delivered to the sugar industry. This assignment is not easy, but realistic. Considerable work on the implementation of the Sakhar /Sugar/ goal-oriented overall scientific and technical program has been done and sugar beet growers in many oblasts, taking into consideration the lessons of past years, have applied maximum efforts in order to grow a high harvest of sweet roots. The efforts of agroindustrial associations must now be directed toward the preparation for harvesting work and the hauling of raw materials. The following task has been set: To complete the digging of roots before 25 October and to deliver them to sugar beet receiving centers before 31 October.

The success of this endeavor will depend to a decisive degree on the level of technical readiness and the degree of reliability of harvesting and loading equipment and on an efficient interaction of all the links of the harvesting-transport conveyer. This year with due regard for what will be obtained during the third quarter 18,322 six-row complexes, 4,100 KST-ZA three-row combines and a large number of loaders should go out to plantations. The available equipment makes it possible to gather the harvest on the dates set. However, in order to attain this, it is necessary to repair every complex and loader in a high-quality manner.

On the whole, the rates of repair of these machines are slightly higher than last year. This matter is best organized in Kiev and Khmel'nitskiy Oblasts. The coefficient of equipment readiness in Vinnitsa Oblast is also higher than the average republic coefficient. At the same time, we must not close our eyes to the fact that the bulk of sugar beet harvesting combines on farms in Mogilev-Podolskiy and Barskiy Rayons and of sugar beet loaders in Peschanskiy and Trostyanetskiy Rayons are not yet ready to go out to the field.

Unfortunately, similar signals are also received from other oblasts. They indicate that in a number of places party and Soviet bodies have slackened their attention to the activity of repair services of kolkhozes and of rayon agricultural equipment associations. The situation must be rectified without delay.

For many farms the sugar beet harvesting campaign is also complicated owing to the fact that the weight of both the roots themselves and of tops is much greater than during preceding years. Therefore, it is very important to see to it that machine operators are able to competently, with due regard for a specific situation, regulate the sugar beet harvesting complex and loader. In a number of oblasts--Poltava, Kharkov, Ternopol and Dnepropetrovsk--before going out to a plantation every machine operator once again undergoes a distinctive recertification for the ability to correctly regulate complex harvesting equipment. Courses are organized for those who are not familiar with this.

Such a practice deserves the widest popularization in all other sugar beet planting oblasts. First of all, councils of rayon agroindustrial associations should be concerned with this. This matter must be organized so that all machine operators mandatorily take examinations in the regulation and adjustment of combines and loaders.

Is this alone to reduce losses to a minimum? For example, the people of Vinnitsa Oblast schedule the gathering and carting out of the harvest so as to maximally reduce the gap between these two operations and to avoid the accumulation of sugar beets in plantations. This experience deserves to be popularized.

At the same time, it is necessary to take into consideration in advance the fact that in a number of cases a certain amount of roots will still be accumulated in the field. Therefore, to avoid their spoilage and sugar losses, it is necessary to provide for the placement of the dug out roots in temporary field clamps. Both rural workers and their partners in the agroindustrial complex--collectives of sugar plants--should equally share the concern for this. The republic's Ministry of the Food Industry must give the most efficient help to sugar beet planting farms in the organization of the field clamping of roots and allocate a sufficient amount of covering material for this purpose.

The fate of the grown harvest will depend to a significant degree on the efficient and regular work of motor vehicle drivers. Last year in Kobelyakskiy Rayon, Poltava Oblast, in Mogilev-Podolskiy Rayon, Vinnitsa Oblast, in Krasilovskiy Rayon, Khmel'nitskiy Oblast and in Zolotonoshskiy Rayon, Cherkassy Oblast 80 percent of all the transport facilities allocated for the conveyance of raw sugar materials were assigned directly to farms and the rest were attached to rayon harvesting staffs. As a result of such a concentration of motor vehicles, the gap between the digging and carting out of sugar beets was reduced markedly and the utilization of motor transport was improved.

Such a practice will now be applied everywhere. In order that it may bring the highest effect, farms should promptly concern themselves with the front of work for motor vehicle drivers and with the creation of proper living conditions for them. Of course, this range of problems must constantly be in the field of vision of soviets of people's deputies and local party bodies. They should once again review in every rayon, farm and enterprise the structures of staffs, groups and control centers called upon to ensure an operative management of the harvesting, transportation and acceptance of sugar beets.

To a great extent the regularity of the field-sugar plant transport conveyer is determined by the organization of the acceptance of raw materials. Therefore, the prompt preparation of sugar beet receiving centers and sugar plants for the season acquires such importance. During the remaining time it is necessary to once again check and, where necessary, to put in order weighing facilities, clamp forming machines, complexes for the unloading of large-tonnage motor vehicles and motor trains and lines for the determination of the general contamination and sugar content of sugar beets.

The preparation of the entire technical arsenal for the forthcoming harvesting campaign must not relegate the concern of sugar beet growers for the care of plantations to the background. Machine operators in Vinnitsa, Rovno, Khmel-nitskiy and a number of other oblasts have already carried out the fourth loosening of soil in interrow spacings. In order not to damage plants and not to cover them with earth, they have equipped cultivators with top removers and special fenders. Care of crops must be continued right up to the beginning of mass digging, since this not only increases the yield, but also facilitates the operation of harvesting equipment.

Every measure must also be taken to clear the areas planted with sugar beets of weeds. Unfortunately, the percent of overgrown plantations is high in Korsun-Shevchenkovskiy, Drabovskiy, Kamenskiy and Smelyanskiy Rayons in Cherkassy Oblast and on a number of farms in Vinnitsa Oblast and in some other oblasts. Agronomical services should also constantly observe crops in order not to let pests and diseases spread on plantations and to promptly suppress them.

The sugar beet harvesting campaign is getting nearer and nearer. To carry it out harmoniously, in an organized way and without losses is the combat mission of both sugar beet growers and their partners in the agroindustrial complex.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

STEPS TO AVOID PAST MISTAKES IN SUGAR BEET HARVESTING TAKEN

Moscow PRAVDA UKRAINY in Russian 2 Mar 83 p 1

/Article: "Sugar Beet Growers Welcome Spring"

/Text/ Makar Anisimovich Posmitnyy, one of the founders of the kolkhoz movement in the country, having heard one day the complaints of his chairman colleagues about weather conditions, uttered the following phrase:

"As far as I am concerned, even if stones fall from the sky, I will get my 40 quintals of grain per hectare."

A sound calculation, the highest standard of farming on the farm headed by him and deep faith in people were behind these words.

Let us glance at the essence of what has been stated more broadly, not only as applied to grain farming. Last year was complicated for all the republic's zones. Many farm managers attribute the low sugar beet harvests to this circumstance. However, the link of Hero of Socialist Labor I. N. Pasechnik from the Kolkhoz imeni 21 S'yezda KPSS in Lipovetskiy Rayon, Vinnitsa Oblast, gathered 512 quintals of sweet roots per hectare. His colleagues from the same area, Hero of Socialist Labor D. I. Vasil'kovskiy from the Kolkhoz imeni Kotovskiy and V. S. Levandovskiy from the Kolkhoz imeni Lenin (both farms are in Yampolskiy Rayon), obtained 563 and 523 quintals of sugar beets per hectare.

A chance? Favorable weather conditions? Not at all. The links of Hero of Socialist Labor I. K. Galaki from the Kolkhoz imeni Kotovskiy in Novomoskovskiy Rayon, Dnepropetrovsk Oblast, of Ye. P. Dekhtyar from the Radyans'ka Ukrayina Kolkhoz in Krasilovskiy Rayon, Khmel'nitskiy Oblast and of V. F. Komar from the Kolkhoz imeni Voroshilov in Mironovskiy Rayon, Kiev Oblast, also exceeded the target of 500 quintals. Cherkassy, Ternopol and other oblasts also have links that have obtained 500 quintals. Their fields are located in various zones both with insufficient and excess moisture. Despite everything the harvests are high.

Let us make the following comparison. The Kolkhoz imeni Lenin in Kazatinskiy Rayon, Vinnitsa Oblast, obtained 563 quintals of sugar roots per hectare on an area of 385 hectares. In the same Vinnitsa Oblast more than one farm, where the yield of the sugar beet hectare was less than 100 quintals, can be mentioned. Unfortunately, some kolkhozes and sovkhozes in other oblasts in the republic were also satisfied with low harvests.

The reasons for this are also known. In the fall scuffling was carried out late, the fall field was not plowed on schedule, technology was grossly violated and little attention was paid to the fertilization of plantations. For example, in Sumy and Rovno Oblasts organic fertilizers were not applied at all on one-fourth of all the sugar beet fields. In Cherkassy and Poltava Oblasts sowing was late, errors in the formation of plant density were made and attention to the protection of crops against pests and diseases was slackened.

As a result, the sugar industry has failed to obtain a significant amount of raw materials. All this places special requirements on the republic's sugar beet growers during this central year of the five-year plan. The following words by Comrade Yu. V. Andropov, general secretary of the CPSU Central Committee, stated at the meeting with Moscow machine tool builders apply to them: "We must finish what, frankly speaking, we have not done during the first 2 years and try to make up for what has been neglected and to create conditions for normal work during the last 2 years of the five-year plan."

It should be noted that in Vinnitsa, Poltava, Kiev and a number of other oblasts with the direct participation of party, Soviet and agricultural bodies last year's miscalculations have been profoundly analyzed and specific measures to avoid them have been mapped out. With due regard for crop rotations our main industrial crop has been placed after the best predecessors. More organic fertilizers than before are applied to it and the preparation of the entire technical arsenal for field work is carried out in a more organized way. The technological adjustment of cultivators and seeders is better than last year and mutual checks on the readiness for the departure to the field are carried out everywhere.

Seed stocks have also been stored in advance. More than 90 percent of the required amount of seeds have already been shipped to farms. Three-fourth of them meet the requirements of the first category of the sowing standard. Almost all seeds have been "dressed" in a protective nutritive jacket, which accelerates germination and protects sprouts against pests and diseases.

In brief, on kolkhozes and sovkhoses a great deal is being done to prevent the repetition of last year's mistakes. A number of practical measures for a more successful realization of the republic Sakhar /Sugar/ overall scientific and technical program have been outlined. The success of this enterprise will now depend to a decisive degree on sugar beet growers and on their skills.

Complicated and responsible tasks have been set for this year. The republic's sugar beet field will occupy more than 1.7 million hectares. As stated in the socialist obligations of the workers of the Ukrainian SSR for 1983, a total of 315 quintals of sweet roots per hectare are to be gathered. The fact that on one-half of the entire sown area sugar beets will be cultivated according to industrial technology is to serve the successful implementation of what has been envisaged. Furthermore, single-germ seeds of promising highly productive regionalized, new varieties are to be sown on more than 1 million hectares. To allocate areas for them in the localities and to see to it that all agrotechnical methods aimed at the attainment of the planned harvest are followed unconditionally--this is the direct duty of farm specialists and managers.

The expansion of the scale of utilization of industrial technology and the higher level of mechanization demand a constant enrichment of knowledge on the part of sugar beet growers. It is gratifying that during the winter 1,000 machine operators improved their skills at the republic seminar held at the Ukrainian SSR Exhibition of USSR National Economic Achievements by the republic's Ministry of Agriculture and the All-Union Scientific Research Institute of Sugar Beets. Similar classes were held in oblasts. Now party and Soviet bodies in the localities and specialists must ensure the entire set of organizational measures, which would contribute to the most efficient use of the acquired knowledge in practice.

Little moisture has accumulated in soil during this winter and one of the top-priority tasks of sugar beet growers is to obtain uniform good sprouts even with these small reserves. Therefore, it is extremely important not to miss a moment of sowing and to see to it that equipment operates with the highest return.

Agronomical services of sugar plants and sugar beet receiving centers can do a great deal in terms of ensuring the envisaged harvests. Unfortunately, for the time being they keep aloof. Therefore, new rayon agroindustrial associations, using their rights and leaning on the support of rayon party committees, must enlist the practical assistance of these services during the period of sowing and care of crops.

The breathing of spring is ever more perceptible and the beginning of work on the sugar beet field is ever closer. To make it as generous as possible means to make a perceptible contribution to the realization of the country's food program.

11,439
CSO: 1824/586

MAJOR CROP PROGRESS AND WEATHER REPORTING

TRANSPORT SHORTAGES THREATEN UKRAINIAN SUGAR BEET HARVEST

Moscow SEL'SKAYA ZHIZN' in Russian 21 Aug 83 p 2

[Article by S. Luzgan, SEL'SKAYA ZHIZN' correspondent, Ukrainian SSR: "For More Sugar From Each Hectare Under Sugar Beets!"]

[Text] /Yesterday the decree of the CPSU Central Committee and the USSR Council of Ministers "On Additional measures to Assure the Prompt Harvesting, Procurements and Processing of Sugar Beets From the 1983 Harvest" was published in the press. Today this newspaper reports on the manner in which the Ukraine's sugar beet growers and processing-industry workers commence the peak season on the beet fields, and on what should be done to make sure that the harvesting of the beets, their conveyance to the factories and their processing would be conducted comprehensively and smoothly./[printed in boldface]

As you drive along the village road you see fields that rapidly change in color. You unwittingly think of the approaching autumn, of the coming end of the reaping of grain and the beginning of another harvesting season--this time for sugar beets. Beets occupy a special place on the calendar of the Ukraine's farmers. Their harvesting is more labor-consuming and it falls due in autumn, when fair weather cannot be expected. There is a need for efficient and well-coordinated effort and action of all the participants in the complex conveyor line of sugar-beet production.

In any kolkhoz and sovkhoz you are certain to be told that the weight of the average sugar beet is now much greater than, and sometimes even double, its weight in the last 5-10 years. I ascertained this personally the other day while touring sugar beet plantations in the republic's northwestern zone, where a good harvest of this crop is maturing. Fulfilling the long-range republic program "Sugar," the working people of the Ukraine are consistently modernizing this important link in the agro-industrial complex. New single-seed high-yielding varieties and hybrids are planted, the complex whole of agrotechnical methods is being employed more competently, and the technology of the harvesting, storage and transportation of sugar beets is being refined. In the Ukraine there is a growing number of mechanized links and detachments,

of kolkhozes and sovkhozes which each year attain high harvest yields, and of enterprises which attain a high yield of white sugar.

Solid scientific resources are being mobilized for assessing the experience gained. Recently an expanded session was held by the NorthWestern Research Center of the UkSSR Academy of Sciences and the presidium of the scientific coordination council under the Vinnitsa Oblast Ukrainian CP Committee. At that session the discussion dealt with increasing the effectiveness of sugar beet production by utilizing the achievements of scientific and technological progress.

N. V. Pasternak, chairman of the Yampol'skiy RAPO [Rayon Agro-Industrial Association] declared in an interview that the initiators of the drive for maximizing the yield of white sugar per hectare have grown a good harvest this year. In August the weight of the average beet harvested on the rayon's 8,150 hectares under this crop exceeded 350 grams, and the mean density of beets per hectare was 102,000.

Nikolay Vasil'yevich said: "Even now we are achieving a harvest of nearly 400 quintals [per hectare]. Each day more than 6 quintals additionally grow per hectare. Thus, by the time mass harvesting commences, more than one dozen of quintals will be additionally available for harvesting. And we are ready to harvest them all promptly, while the collective of the Gonorovskiy Plant is ready to process them optimally. True, there is one 'bottleneck'--transport."

Both administrators and party workers in other rayons, too, mentioned that the transport possibilities at present may be inadequate. On this subject a talk was also held with L. L. Krivoruchko, first secretary of the Vinnitsa Oblast Ukrainian CP Committee:

Leontiy Leont'yevich declared: "The oblast's beet growers are expected to sell to the state more than 7 million tons of sugar beets. The maturing harvest is quite good; much labor was invested in it and the harvesting equipment is in better condition than in the previous years. The preparation of sugar plants for the new campaign is being completed. They will start operating this year earlier than usual, so they can process more efficiently a large quantity of the raw material. Mass harvesting also will commence earlier. This means that the sugar beets have to be delivered to reception stations as rapidly as possible, and best of all on the day of their harvesting, before they rot and lose weight and sugar content. We do not have enough trucks to cope with the increased volume of beet hauls. Usually, the republic's southern oblasts help us out with additional trucks. This year, too, they will help us. But the trouble is that they promise to dispatch trucks to us as usual in the second half of September, whereas by that time a lot of harvested beets will have accumulated."

On returning to Kiev I sounded out the republic organizations about the transport problem. Yes, I was told, 95,000 trucks are being dispatched from the southern oblasts to the beet-growing zones. but not as early as could be desired.

What does this mean? Last year the trucks arrived in small groups, as a rule toward the end of September, and in smaller numbers than planned. There was a considerable pile-up of sugar beets on the plantations. For this year, too, the arrival of the trucks at their destinations has again been scheduled for a later date than needed--15 September--even though selective harvesting is already starting and the sugar plants are starting to operate. And as for that very same Vinnitsa Oblast, trucks are scheduled to arrive there as late as on 21 September.

The transport problem could be alleviated by organizing additional reception stations so as to increase truck turnover. But the workers of the republic's Ministry of the Food Industry are opposed to this. It may be that the establishment of these stations is inconvenient from the administrative point of view. But is it convenient for the beet-growing farms and the state when, owing to transport shortages, beets are left to lie on the fields and lose weight and sugar content, thus leading to the loss of hundreds of thousands of tons of sugar?

Now both beet growers and sugar producers are, as the saying goes, in the same boat, and the agro-industrial association has to solve this problem from the standpoint of national rather than administrative interests.

Of course, both kolkhoz and sovkhos transport and outside transport should be better utilized. This highly important potential should also be exploited through the united effort of the agro-industrial association. If last year is considered, only a few rayons in which the beet transporting schedule was closely followed can be named. The causes varied but the result was the same: shift quotas were underfulfilled.

Centralized management of motor transport operations should be more broadly introduced. Last year 80 percent of all motor vehicles allocated for carrying sugar beets in various rayons of the Vinnitsa, Poltava, Khmel'nitskiy, Cherkassy and certain other oblasts was assigned directly to farms and the remainder allocated to main rayon harvesting staffs. Such a concentration served to improve the utilization of trucks.

Recently increasing complaints are being made about sugar plants. They are not unfounded: each year hundreds of millions of rubles are spent on the technological modernization of processing enterprises in the Ukraine. Even so, part of the "modernized" plants not only fails to augment the degree of its extraction of sugar from beets but even lowers that indicator. Last year 18 enterprises in Vinnitsa Oblast tolerated excessive losses of sugar in molasses and thus sustained a production shortfall of 4,000 tons of sugar. Substantial losses also are being sustained in other ways.

But to be fair it should be stated that beet growers should share the blame together with sugar-makers. In recent years the use of continuous-flow and continuous-transloading techniques of harvesting has been spreading. But many

beets get damaged owing to violations of technology. Such beets are difficult to store, and they lose sugar. Many mechanizers attribute the damage to flaws in beet harvesting equipment. The well-known beet grower Yemel'yan Parubok agrees that flaws in equipment design are a factor but considers the principal cause to be the poor training of the mechanizers, their inability to adjust the operating modes of beet harvesting combines to terrain relief and weather conditions. This means that engineers-adjusters have to be assigned to large beet harvesting combines.

One other important factor: Since now the weight of both the beets and their top foliage is much greater than in the previous years, this complicates their harvesting on many farms. Hence it is highly important to assure that mechanizers know how to adjust precisely beet-harvesting equipment and loaders. The special re-certification of experts in beet harvesting instituted in the Poltava, Kharkov, Ternopol, Cherkassy and other oblasts deserves approbation.

This year beets are harvested in the Ukraine from an area of 1,727,000 hectares. Plans exist for delivering 50 million standard tons of this raw material for processing to sugar factories. More than 18,000 six-row complexes, 4,100 three-row KST-3A combines, a large number of loaders, and more than 100,000 trucks will appear on the fields during the mass harvesting season. The task posed is to harvest completely all of the republic's beet plantations by October. But coping with this requires utilizing every combine, every loader, and every truck and trailer.

A few years back the beet growers and sugar-makers, and later also truck drivers, of Yampol'skiy Rayon concluded an agreement for mutual collaboration and scored high end-results. For several years in a row they have ever since been obtaining 43-50 quintals of processed sugar per hectare planted with beets. This initiative, which was approved by the CPSU Central Committee, has been widely emulated. Now that the agro-industrial associations have been established, the collaboration of the partners should enter a qualitatively new stage of development. At present, on the eve of the mass beet harvesting season, the partners in the agro-industrial association should overcome the bottlenecks and coordinate their work on the sugar-beet "conveyor line."

...The first to start selective harvesting of beets in the Ukraine were the farms of Kiev Oblast. The smokestacks of the first sugar plants--Luchinskiy, Uzinskiy and Rakitnyanskiy--have begun to emit smoke. In a week hence seven sugar plants in Vinnitsa Oblast will start processing beets, and the mass sugar-making campaign in this republic will commence at the beginning of September. It is highly important to coordinate sugar-making from the very outset with the entire mighty beet "conveyor line," and to streamline its operation so as to avoid any disruptions.

1386
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MAJOR CROP PROGRESS AND WEATHER REPORTING

TRANSPORTATION OF UKRAINIAN GRAIN, BEET HARVEST DISCUSSED

Moscow PRAVDA in Russian 18 Sep 83 p 1

[Article by O. Gusev, PRAVDA correspondent, Ukrainian SSR: "On Autumnal Routes: Safeguarding the Harvest"]

[Text] These days two streams, one of grain and the other of sugar beets, merge into a single mighty river as it were on the motor roads of the Ukraine. Truck drivers of the system of the UkSSR Ministry of Motor Transport alone have delivered about 4 million tons of grains. Now trucks carrying the sweet rootcrop increasingly often travel in groups or in a continuous column. The number of KamAZ tractor-trailer trucks encountered on the roads is particularly large.

A. Artemenko, Deputy UkSSR Minister of Motor Transport, declared: "Such truck-trailer trains assured the successful transportation of the early grain harvest. The Crimean driver I. Dochinets, for example, delivered more than 3,000 tons of grain. High results were achieved by A. Yevdokimenko, P. Mishchenko and A. Petrov of Kiev Oblast. They used only truck-trailer trains in delivering grain to the Fastov grain reception station. By using 18 ZIL truck-trailer trains they accomplished a volume of operations that otherwise could be handled only with the aid of 115 single trucks."

Now that shipments of the beet harvest are under way, the Fastov personnel are likewise using this method. They have repaired in advance truck bodies and raised the height of their sides. At the Kozhanskiy Sugar Plant a truck maintenance station was installed, thus raising the readiness coefficient of trucks to 0.98.

The driver brigades headed by A. Yevdokimenko, P. Mishchenko and A. Petrov have concluded collective contracts with the farms and the sugar plant. The drivers obligated themselves to pick up sugar beets as rapidly as possible and without losses, while the kolkhozes, sovkhozes and the plant obligated themselves to provide the conditions for a smooth operation.

L. Khodakov, first secretary of the Fastov city party committee, said: "The contracts are being implemented. All participants in the harvesting operations are interested in this."

In earlier years about 400 trucks was dispatched to the rayon. Now only 80 trucks are used to pick up sugar beets. Each driver transports from the field to the plant a volume of beets that is greater by a factor of 2.5-3 than in the past.

The well-organized dispatcher service is of great help. The situation on the routes is known at any time. Loading time could be reduced to a minimum. Spare trailers usually are available on the farms. Thus while a truck trailer train carries the next shipment to the sugar plant, the spare trailer on the field is being loaded and towed by means of a tractor to the roadside.

During the first few days of beet harvesting drivers in the Kiev, Khmel'nitskiy and Cherkassy oblasts achieved high indicators of performance. Some of them have already delivered a total of 2,000 to 3,000 tons of beets each, and driver V. Levitskiy of Kagarlyk'skiy Rayon has delivered a total of nearly 4,000 tons in his KamAZ truck-trailer train with its two trailers.

The pace could be higher. But the roads are not in good condition everywhere. For some reason, repair of particularly traffic-laden segments of the Kozhanka-Yakhny-Dmitrovska roads has begun during the peak of harvest-transporting operations. Functionaries of the "Gosavtoinspektsiya" [State Motor Vehicle Inspectorate] do not always act in close cooperation with road maintenance personnel. This concerns the operative deployment or removal of speed signs. On the Kiev-Khar'kov-Donetsk route, not far from the settlement of Valki, for example, the posted maximum speed on a recently asphalted road segment is 30 kilometers. Yet a little farther on, where the road is worse, the roadsign permits a maximum speed of 60 kilometers.

As shown by inspection tours performed by people's controllers, some segments of access roads to beet reception stations are still in poor condition in the Vinnitsa and Zaporozhye oblasts. Drivers have major grievances against the road-building organizations in the Volchanskiy and Novovodolazhskiy rayons of Kharkov Oblast. There are many potholes on the roads of Dnepropetrovsk Oblast, especially in the region of Pavlograd. Incontestably, the UkSSR Ministry of the Construction and Maintenance of Motor Highways and the republic Gosavtoinspektsiya should be more demanding in this respect.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

KIEV OBLAST BEGINS SUGAR BEET HARVESTING

Moscow SEL'SKAYA ZHIZN' in Russian 24 Aug 83 p 1

[TASS communique: "Concerns of Sugar Beet Growers"]

[Text] KIEV, 23 [Aug 83] (TASS). The sugar beet campaign on the beet plantations of the Ukraine was opened by Kiev Oblast, one of the leading beet growing oblasts, where selective digging of beets was commenced. Today truck drivers have delivered the first shipments of the raw material from the new harvest to processing enterprises.

Guiding themselves by the decree of the CPSU Central Committee and the USSR Council of Ministers "On Additional Measures to Assure the Prompt Harvesting, Procurements and Processing of Sugar Beets From the 1983 Harvest," farmers strive to conduct all operations comprehensively and smoothly, on utilizing the grain-reaping experience. As the TASS correspondent was informed at the oblast agricultural administration, 240 combined-skills teams of equipment operators have been set up for this purpose.

Plans exist for a broad use of progressive continuous-flow and continuous-transloading methods, along with hourly trucking schedules. Currently final preparations for mass harvesting are under way on the farms: the loosening of the soil, the removal of weeds and special treatment of the crop against diseases. Following the example of twice Heroes of Socialist Labor S. Vishtak and O. Diptan, Hero of Socialist Labor A. Kosyachenko and other masters, at present not just individual subdivisions but dozens of farms in the oblast strive to attain a harvest of 500 quintals per hectare.

The beet growers of Kiev Oblast expect to complete the harvesting of beets by 24 October and their transportation, by 31 October.

1386

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MAJOR CROP PROGRESS AND WEATHER REPORTING

PREPARATIONS FOR POTATO HARVEST IN BELORUSSIA

Moscow SEL'SKAYA ZHIZN' in Russian 4 Aug 83 p 1

[Article by V. Legan'kov, 'SEL'SKAYA ZHIZN' correspondent, Belorussian SSR: "While the Tuber is Ripening: Belorussian Rural Toilers Conduct Field Work and Prepare for the Potato Harvest"]

[Text] The potato crop is ripening in Belorussia and the first new potatoes have appeared in the stores. Treatment with pesticides and herbicides is proceeding full steam ahead on the principal fields planted with the late-maturing varieties.

V. V. Tvarovskiy, link leader at the "Novaya zhizn'" Kolkhoz in Nesvizhskiy Rayon, Minsk Oblast, said: "The Colorado beetle and the phytophthora could damage the crop. We are taking steps to prevent this."

V. V. Tvarovskiy's link, which is now working for the second year under the collective contract system, has pledged itself to dig up 260 quintals of the tubers from each of the 69 hectares assigned to it. The direct interest of the potato growers in optimal end-results and their industriousness, competence and the use of advanced agricultural equipment all enable them to grow such a harvest.

The potato growers of Nesvizhskiy Rayon fulfilled the plan for the first 2 years of the 5-Year Plan and now have the potential for digging up 235 quintals of the tubers per hectare from the 2,700 hectares they cultivate and delivering at least 15,000 tons of potatoes compared with the plan target of 13,400 tons. N. A. Zhuk, chairman of the RAPO [Rayon Agro-Industrial Association Council] singles out the elimination of the notorious lack of personal responsibility for field work among the factors that have contributed to the smooth course of the operations, along with the uniting of the efforts of all the partners in farming operations on precisely this sector. All the potato plantations have been assigned to 43 permanent mechanized final-production links of which 31 operate under the collective contract system.

True, not all aspects of the application of the collective contract system have yet been clarified. The principle of direct material interest in

reducing expenditures and production cost has not yet been applied to every cost-accounting task.

Clearly, RAPO councils have yet to do a great deal of work on improving the economic relations between the kolkhozes and sovkhoses and their partners, especially considering that the contribution of these partners to the overall result can be quite considerable. For example, there is the "Sel'khozkhimiya" [All-Union Association for Agricultural Chemicals], which bears full responsibility for treating potato fields against diseases and pests. It has set up 12 links and assigned each link one or two farms. Their operations are personally directed by crop-protection agronomists. Following reports from observer posts and by agreement with the agronomic services of the farms, the "Sel'khozkhimiya" at present is completing comprehensive treatment of the late-maturing varieties. The early- and midseason-maturing varieties have been treated twice and, where needed, thrice against the potato beetle and the phytophthora. In this connections, rationalizers have converted to stanchion spraying nearly one-half of the fan-type sprayers used.

While the crop is maturing on the fields, the RAPO's technical service is repairing the harvesting equipment. The rayon association of the "Sel'khoz-tekhnika" All-Union Agricultural Equipment Association is providing the farms with the needed components and spare parts and has performed in its shops the overhauls of combine harvesters at cost, without any surcharges.

The situation in Nesvizhskiy Rayon, which lies in the hinterland, is extremely typical of the entire Belorussia. At present, for the first time, about a thousand mechanized brigades and more than a thousand mechanized links work under the collective contract system. They grow potatoes on 186,000 hectares or 51 percent of the socialized potato-growing land (in Brest Oblast, 75 percent).

Nearly everywhere, with the exception of certain farms in the Poles'ye Region which have been affected by drought and summer frosts on peat fields, crops are maturing normally and even 1.5 to 2 weeks ahead of the customary season, which enhances the opportunities for growing a higher harvest of potatoes of better quality. This republic has a real opportunity for fulfilling the socialist pledges for the 3rd year of the 5-year plan: harvesting 180 quintals of potatoes per hectare and selling nearly 2 million tons of potatoes to the state. This task is all the more responsible considering that in the previous 2 years Belorussian kolkhozes and sovkhoses provided the country with 587,000 fewer tons of potatoes than targeted, chiefly owing to last year's poor crop. This shortfall can be compensated for only through an organized conduct of the final field operations and prompt and competent preparations for harvesting the potato crop.

As never before, the Belorussian "Bel'sel'khozkhimiya", which is fully responsible for chemical field treatment in this republic, is providing effective assistance to farmers. Its subdivisions have treated more than three times as many potato fields as they did last year.

But as for the "Sel'khoztekhnika," farms are complaining about it. Through the fault of its repair personnel, a large part of combine harvesters stands idle during the peak of the grain-harvesting season and the supply services do not provide adequate amounts of certain spare parts to the farms. Will the same thing happen when it is time to dig up potatoes? The proportion of fully functioning combine harvesters is particularly low in the southern oblasts--Gomel, Brest and Grodno, and yet there is every sign that this year the mass potato harvesting season will begin not in September as usual but already during the 3rd decade of August, so that there is little time left for final preparations.

1386

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MAJOR CROP PROGRESS AND WEATHER REPORTING

EXPEDITING POTATO HARVEST IN BELORUSSIA

Minsk SEL'SKAYA GAZETA in Russian 20 Aug 83 p 2

[Article by A. Il'yasevich, chief, potato department, Belorussian SSR Ministry of Agriculture, A. Kruglyakov, director, BelNIIKPO [expansion unknown], and N. Kandaulov, director of laboratory at the TsNIIMESKh [Central Scientific Research Institute of Rural Mechanization and Electrification of the Non-Chernozem Zone of the USSR]: "Focus Attention on the Potato Harvest" under the rubric "To the Notice of Farmers"; passages enclosed in slantlines printed in boldface in the original source]

[Text] The current weather conditions have accelerated the evolution of the stages of growth and development of all potato varieties. Tuber-formation has begun much earlier than in the preceding years. Hence also it is expected that tuber growth will cease earlier as well. This is also due by the shortage of moisture in the soil owing to the prolonged absence of rainfall and the higher air temperatures. Hence the main task at present is to take all the necessary steps to assure a rapid and competent harvesting of potatoes as well as to preserve the entire harvest.

/IN VIEW OF THE MORE RAPID PHYSIOLOGICAL MATURING OF THE TUBERS, EVEN NOW THE HARVESTING OF EARLY, EARLY-MIDDLE AND MIDDLE-MATURING POTATO VARIETIES SHOULD BE COMMENCED EVERYWHERE, SINCE IN PRACTICE THERE CAN BE NO FURTHER INCREASE IN THEIR HARVEST./ So far as this year's conditions for the republic as a whole are concerned, potato-digging should be completed by 25 October-1 September.

Of major importance to the prompt and competent conduct of this work is a suitable preparation of the material-technical base along with thoroughly planned schedules of operations reflecting progressive forms of the organization and remuneration of labor and effective socialist competition. The potato-harvesting and sorting machinery should be staffed with highly skilled operators and assistants throughout the harvesting season. Prior to the commencement of mass harvesting, all kolkhozes and sovkhozes should complete the repair and preparation of all potato-harvesting equipment and its field trials.

/THOROUGHLY PREPARED AND ADJUSTED POTATO HARVESTING MACHINERY WILL ASSURE HARVESTING TUBERS OF THE REQUIRED PURITY AT MINIMUM LOSS AND DAMAGE. PRIOR TO THE COMMENCEMENT OF HARVESTING THE RUNNING GEAR OF THE HARVESTERS SHOULD BE ADJUSTED TO FOUR-WHEEL DRIVE. BLADES SHOULD BE ADJUSTED TO THE PROPER DIGGING DEPTH SO AS TO AVOID SHEARING TUBERS AND OVERLOADING THE SEPARATING ORGANS WITH AN EXCESSIVE WEIGHT OF SOIL. TO REDUCE TUBER LOSSES, IT IS NECESSARY TO TIGHTEN THE JOINTS OF ELEVATOR SIDES, CLOD COMPACTORS AND THE WINCH DRUM AS WELL AS TO STRAIGHTEN OR REPLACE BENT OR BROKEN RODS IN THE ELEVATOR CANVAS./

To alleviate the operating conditions of harvesting machinery and expedite the maturing of tubers, the following pre-harvest operations should be conducted: As part of general sowing work, top foliage should be mowed 5 or 6 days before harvesting--and on seed potato fields, 12-14 days before harvesting. Good results are produced by chemical destruction of top foliage conducted 12-14 days prior to harvesting, by spraying the fields with a 3-5 percent solution of magnesium chlorate. If there is a shortage of this chemical, it is advisable to apply an half-strength solution upon first conducting mechanical removal of the top foliage. The desiccation of the top foliage destroys the spores of the phythophtora in the foliage as well as in the soil.

The top foliage can also be used as fodder. It is silaged together with green corn and other crops. But in every individual case it should be analyzed at a veterinary toxicological monitoring laboratory. Following the removal of top foliage on soils of moderate and difficult mechanical composition, the inter-row areas in sectors with "smeared-out" furrows should be loosened to a depth of 12-14 cm with the aid of KON-2.8 and KRN-4.2 cultivators having arrow-shaped teeth. This disrupts the root system of the plants, dries the soil better and improves separation as well as the performance of the machinery.

/THE AVAILABILITY OF EQUIPMENT MAKES IT POSSIBLE TO CONDUCT POTATO HARVESTING BY MEANS OF POTATO-HARVESTING COMBINES ALONE./ Hence, potato diggers should be used only slightly contoured fields as well as dissected terrain and sectors markedly infested with stones.

/ON HIGH-MOISTURE (24-26 PERCENT) SOIL AND GIVEN A TUBER YIELD OF UP TO 200 QUINTALS PER HECTARE ON MEDIUM AND DIFFICULT SOILS, POTATOES ARE HARVESTED BY THE SEPARATION METHOD. THIS IS DONE WITH THE AID OF AN UKV-2 DIGGER-WINDROW LAYER ACROSS FOUR OR SIX ROWS WHICH ARE ARRANGED INTO A WINDROW ON THE FIELD SURFACE AND PICKED UP BY MEANS OF A COMBINE EQUIPPED WITH AN ACTIVE BLADE. ON SOILS OF LIGHT AND MEDIUM MECHANICAL COMPOSITION THAT SEPARATE WELL, THE COMBINED METHOD OF HARVESTING IS USED IN ORDER TO INCREASE COMBINE PRODUCTIVITY. IN THIS CASE, THE TUBERS ARE DUG OUT BY THE WINDROW-LAYER FROM TWO OR FOUR ROWS AT A TIME AND PLACED IN THE INTER-ROW AREAS OF ADJACENT SECTORS WHICH ARE SUBSEQUENTLY HARVESTED BY MEANS OF THE COMBINE. THE COMBINED METHOD OF HARVESTING SERVES TO INCREASE COMBINE PRODUCTIVITY BY A FACTOR OF 1.5-2./

In recent years the Ye-684 triple-row digger-loader has become widely used in the republic: compared with the harvesting combine, its productivity is higher by a factor of 1.7 and susceptibility to damage lower by 30 percent. It is expedient to use this machine on light and medium well-separating soils with

prior loosening of inter-row areas. On difficult soils with a high moisture content, the KTN-2B and KST-1.4 potato diggers should be used. The design of the KST-1.4 digger provides for varying the intensity of soil separation depending on the conditions of harvesting.

/THE HARVESTING OF 'THE SECOND BREAD' [POTATOES] THIS YEAR SHOULD BE CONDUCTED EVERYWHERE BY COMBINED-SKILLS TEAMS OF OPERATORS SET UP FOR COMPREHENSIVE UTILIZATION OF EQUIPMENT TO CARRY OUT THE COMPLETE TECHNOLOGICAL CYCLE./ The advantages of such an organization of labor are confirmed by the operating experience of potato growers in the Ivanovskiy, Dobrushskiy, Shchuchinskiy, Volkovysskiy, Nesvizhskiy, Kletskiy, Volozhinskiy, Bobruyskiy and various other rayons where harvesting is completed within 17-20 calendar days.

/THE HARVESTING AND TRANSPORT TEAMS SHOULD INCLUDE LINKS FOR CONDUCTING THE FOLLOWING OPERATIONS: PREPARATION OF FIELDS FOR HARVESTING; HARVESTING AND TRANSPORTATION; POST-HARVESTING TREATMENT OF POTATOES; STORAGE OF POTATOES; REPLowing OF POTATO FIELDS, TECHNICAL MAINTENANCE, AND CONSUMER SERVICES. IT SHOULD BE MANDATORY FOR THE HARVESTING AND TRANSPORT TEAMS TO INCLUDE LEADERS AND MEMBERS OF MECHANIZED LINKS FOR POTATO CULTIVATION OPERATING UNDER THE COLLECTIVE CONTRACT SYSTEM./

Everything should be done to introduce progressive techniques for organizing harvesting operations on the basis of longer work time. This includes organizing two-shift operation, delivering hot meals to field workers, increasing net work time per shift, unloading while in motion, rational division of sectors into subsectors, refueling directly on the field, complementing the crew with two tractor and combine operators, prior harvesting of the tubers from crop-rotation belts, and uninterrupted operation of machinery throughout the work day.

To reduce stoppages of harvesting equipment owing to breakdowns and operating defects, maintenance service should be efficiently organized. To this end, every farm should operate mobile and stationary repair links and a stockpile of the needed equipment, components and spare parts. All rayon associations of the "Sel'khoztekhnika" [Agricultural Equipment Association] should organize round-the-clock operation of their shops, equipment replacement stations, dispatcher service, and supply facilities, and they should set up stocks of the needed components and units.

Harvesting should be coupled with determining the attendant losses and organizing the replowing of potato fields by means of potato diggers or cultivators in two directions: along and across. It should become a rule for every kolkhoz and sovkhoz that the lands subjected to replowing with subsequent pick-up of tubers are to be regarded as harvested lands.

/THE QUALITY OF SEED MATERIAL LARGELY DETERMINES NEXT YEAR'S HARVEST LEVEL./ Hence, along with harvesting, special attention should be devoted to setting up seed stockpiles. Long-term statistics accumulated by the BelNIKPO and the experience of the leading farms of the republic convincingly demonstrate that stable annual potato harvests can be achieved only if each farm grows three or

four varieties of potatoes with vegetation seasons of varying length. Such a selection of varieties assures the most efficient utilization of the precipitation that occurs during various vegetation periods of the potato.

In view of all these circumstances, precisely now it is necessary to assure planting for seed purposes of tubers of an early or early-middle or middle-maturing variety along with tubers of one or two late-maturing varieties, in the amount of 5.5 tons per hectare of planned planting area.

/THE POTATO VARIETIES REGIONIZED IN THIS REPUBLIC ASSURE A PROPER SELECTION OF VARIETIES FOR EACH ZONE. THUS, THE FOLLOWING ARE REGIONIZED HERE WITHIN THE FIRST-NAMED GROUP: "BELORUSSIAN EARLY," "VOROTYNSKIY EARLY," "PRIGOZHIIY-2," "ADRETTA," "NOVINKA," "DETSKO-SEL'SKIY, AND "VYATKA"; WITHIN THE SECOND GROUP: "OGONEK"; AND WITHIN THE THIRD GROUP, "LOSHITSKIY," "SADKO," "TEMP," "KOMSOMOLETS-20," AND "ZUBRENOK."/

/IN ADDITION, THE REPUBLIC'S FARMS GROWING MOTHER STOCK SEEDS WILL THIS YEAR TRANSMIT TO THE KOLKHOZES AND SOVKHOZES MORE THAN 35,000 TONS OF THESE SEEDS, WHICH SHOULD BE ALLOCATED SO AS TO TAKE INTO ACCOUNT THE NEED TO PROVIDE KOLKHOZES AND SOVKHOZES WITH THREE OR FOUR VARIETIES DIFFERING IN THEIR MATURING SEASONS./

The mother stock seeds purchased in 1983 should be used to plant first year's offspring in seed nurseries. It should be borne in mind that, in accordance with the intra-farm seed growing system adopted in this republic, kolkhozes and sovkhozes should maintain nurseries for first- and second-year offspring as well as seed sectors. These should be harvested first, and in good weather at that.

/SPECIFIC MEASURES SHOULD BE TAKEN TO ASSURE THAT THE SEED STOCKS FOR THE 1984 HARVEST INCLUDE TUBERS OF NOT BELOW THE FIFTH REPRODUCTION, THAT ALL PLANTINGS OF MULTIPLY REPRODUCED REGIONIZED AND PROMISING VARIETIES BE PRESERVED AND THAT MOTHER STOCK BE USED FOR SEEDS ONLY./

During the harvesting, transportation and storage of seed potatoes special attention should be paid to preventing the commingling of seed varieties and generations.

The attendant high temperatures create favorable conditions for the development of bacterial diseases. In addition, the earlier harvesting of potatoes affects adversely their preservability. /TO ASSURE PRESERVING THE ENTIRE HARVEST, SPECIAL ATTENTION SHOULD BE PAID TO THE DRYING, VENTILATION AND SPROUTING OF SEED TUBERS, AS WELL AS TO THE COMPLETE FILLING OF ALL AVAILABLE POTATO STORAGE BINS AND EQUIPPING THEM WITH ACTIVE AND INTAKE-EXHAUST VENTILATION SYSTEM AND PROVIDING EVERY CONDITION FOR PRECLUDING THE SPOILAGE OF POTATOES./ This year every step should be taken to store seed potato stocks only in storage bins and actively ventilated regular pits. The ventilation should be turned on chiefly at night or in the daytime in the presence of lower temperatures. In addition, the proper storage of the potatoes remaining on the farms for use as food and fodder should be attended to. For

better preservation and to assure the ripening of their skins, the harvested potatoes should first be kept for 2 or 3 weeks in temporary pits, whereupon they should be carefully sorted and stored in relatively small pits (accommodating 15-20 tons).

/THE DIFFERENCE BETWEEN ACTUAL CROP YIELD AND BIOLOGICAL YIELD SHOULD SERVE AS THE BASIS FOR DETERMINING THE WAGES OF THE HARVESTING EQUIPMENT OPERATORS./

/EXTRA PAY SHOULD BE GRANTED FOR A HIGHLY SKILLED ON-SCHEDULE AND LOSS-FREE CONDUCT OF OPERATIONS. THE RECOMMENDED AMOUNTS OF EXTRA PAY FOR HARVESTING POTATOES SHOULD BE GRANTED IF THE CONDUCT OF OPERATIONS IS RATED 'EXCELLENT.' WHEN THE WEATHER IS POOR, FARM MANAGERS MAY, IN CONSULTATION WITH TRADE-UNION ORGANIZATIONS, FIX PROVISIONAL OUTPUT QUOTAS FOR HARVESTING POTATOES ON ESPECIALLY COMPLEX SECTORS./

/FOR EVERY HOUR OF NIGHT-TIME WORK, UNDER THE PIECEWORK WAGE SYSTEM, THE WORKER RECEIVES EXTRA PAY AMOUNTING TO ONE-SEVENTH OF HIS WAGE CATEGORY IN EXCESS OF HIS PIECEWORK WAGE RATE. NIGHT-TIME WORK IS CONSIDERED TO BE WORK FROM 2200 HOURS AT NIGHT TILL 0600 HOURS IN THE MORNING./

Operative monitoring of the prompt and competent conduct of the harvesting of potatoes and their transfer to seed stockpiles, sales to the state and shipment to the all-Union stockpile should be handled by the heads of production sectors or brigade leaders in cooperation with the agronomic services of the kolkhozes and sovkhozes.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

ATTENTION FOCUSED ON BELORUSSIAN POTATO HARVEST

Minsk SEL'SKAYA GAZETA in Russian 6 Sep 83 p 1

[Unsigned article: "Focus All Attention on Potato Harvest and Procurements!"]

[Text] This year potatoes will have to be harvested from an area of 360,700 hectares in this republic. According to operative statistics of the Belorussian SSR Ministry of Agriculture, 1,577 kolkhozes and sovkhoses in this republic have started harvesting potatoes--this is 65 percent of the total number of farms. The largest proportions of farms active in this harvesting are in Gomel Oblast (95.5 percent) and Minsk Oblast (87 percent). In the Mogilev and Vitebsk oblasts this indicator does not exceed 13-19 percent.

Currently 1,315 combines--or 12 percent of all such existing equipment, work on the republic's potato fields. The output per harvesting equipment unit is only 1.9 hectares. In Mogilev Oblast this output is 1.7 hectares; in Brest Oblast, 1.8 hectares; and in Gomel Oblast, 2 hectares.

/THE MOST IMPORTANT CURRENT TASK IS TO START OPERATING THE PERTINENT EQUIPMENT EVERYWHERE AND STRIVE TO USE IT AS PRODUCTIVELY AS POSSIBLE AS WELL AS TO ATTAIN A HIGH QUALITY OF HARVESTING OPERATIONS. ALONG WITH THE HARVESTING OF THE TUBERS IT IS NECESSARY TO SET ASIDE SEED STOCKPILES AND SPEED UP THE PACE OF POTATO SALES TO THE STATE./[printed in boldface]

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MAJOR CROP PROGRESS AND WEATHER REPORTING

POTATO HARVEST PROGRESS IN BELORUSSIA

Moscow SEL'SKAYA ZHIZN' in Russian 17 Sep 83 p 1

[Article by V. Legan'kov, 'SEL'SKAYA ZHIZN'' correspondent, Belorussian SSR: "The Belorussian Potato"]

[Excerpts] Many farms in Belorussia at present have grown higher potato harvests than in the previous years: about 200 quintals are harvested per hectare on the average, and the leading kolkhozes and sovkhoses harvest as many as 300 quintals per hectare.

The "harvest conveyor" is operating efficiently in Luninetskiy Rayon, Brest Oblast, where the local farmers are gratified with the results of their work...

K. Sumar, chairman of the Luninetskiy Rayon RAPO [Rayon Agricultural Association] Council, said: "People are working as hard as they can. The restructuring of management of the agro-industrial complex, the conversion to the collective contract system and the improvements in discipline are producing their effects. All the services are geared to work for agriculture. The rayon's plan of potato sales to the state is 17,600 tons, but it intends to actually sell about 27,000 tons of select-grade potatoes and thus also make up for the shortfall of the last 2 years.

Instances of this kind could be multiplied throughout Belorussia. In the same Brest Oblast, the potato crop has already been harvested on one-third of all potato fields during the first decade of September not only in the Luninetskiy Rayon but also in the Lyakhovichskiy, Ivanovskiy, Gantsevichskiy and Zhabinkovskiy rayons. In Minsk Oblast the potato growers of the Nesvizhskiy, Letskiy and Kopyl'skiy rayons have made the greatest progress. The first in that oblast to report completion of the harvest was the Kolkhoz imeni Chkalov, Soligorskii Rayon. The pacesetting crews under Hero of Socialist Labor S. Dubovskiy and V. Matveyev have dug up 2,500 tons of the tuber each during the season. With its yield of 270 quintals of potatoes per hectare, this kolkhoz has exceeded by a factor of more than 1.5 its plan for potato sales to the state. An ardent competition has developed between the nationally famous links headed by Hero of Socialist Labor O. Kazachka at the "Lyubanskaya" Experimental Base and by I. Sinitskiy, who was awarded three different degrees

of the Order of Labor Glory, at the "Zagal'skiy" Sovkhoz in Lyubanskiy Rayon. They harvest 400 quintals of potatoes per hectare each on their fields and have already dug up 2,500 tons with their Ye-684 potato diggers.

More than 360,000 hectares are planted with potatoes in the kolkhozes and sovkhoses of this republic. The annual growth rate of the potato harvest is 4-5 percent in many places. Harvesting is done with the aid of students and "patrons" from cities and settlements. Trucks carrying the new harvest are hastening toward the railroad stations. The plan for potato procurements in this republic amounts to nearly 2 million tons. The farms strive to fulfill it with honor.

A special concern is to provide potatoes to the all-Union stockpile of 585,700 tons of food potatoes and 130,000 tons of varietal seed potatoes. Priority is given to dispatching trainloads of potatoes to Moscow, Leningrad and regions of the Far North. The procurement personnel has provided extensive facilities for transloading the potato harvest. A total of 113 train stations has been equipped with 128 transloading facilities, some of which have been modernized and expanded this summer. To avert stoppages of motor transport while awaiting the arrival of freight trains, 177 mechanized bunkers have been built to store potatoes at train stations. About 1,000 trucks deriving from motorized columns, the "Sel'khoztekhnika and other organizations and enterprises have been mobilized for centralized pick-up. At most railroad stations their stoppages have been reduced to a minimum. The operations are organized on a round-the-clock basis. Train dispatching schedules are being followed. More than 100,000 tons of potatoes have already been dispatched to the all-Union stockpile.

Even so, the pace of harvesting and procurements could be more rapid. Delays in providing rolling stock are an obstacle, and in some rayons fuel for motor vehicles has become a problem. The harvesting schedule and the "peak" season of hauls have been put forward a couple of weeks, but the funds allotted for gasoline are being utilized according to the old schedule composed as far back as in the beginning of the year. The possibility of accelerating gasoline deliveries should be explored. This will speed up the pace of harvesting.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

INDUSTRIAL TECHNOLOGY FOR SUNFLOWER PRODUCTION IN NORTH OSETIAN ASSR

Krasnodar SEL'SKIYE ZORI in Russian No 1, Jan 83 p 21

/Article by B. Basayev and T. Dzobelow, candidates of economic sciences and assistant professors at the Gorkiy Agricultural Institute/

/Excerpts/ Sunflowers are one of the principal oil-bearing crops cultivated at kolkhozes and sovkhoses in the North Osetian ASSR. The favorable soil-climatic conditions found in this autonomous republic promote the development of high and stable yields of oil-bearing seed. Occupying from 7 to 11 percent of the area under crops (in excess of 6,000 hectares), sunflowers provide the farms with 10-20 percent of their income from field crop husbandry.

During the 1976-1980 period, the expenditures for seed, fertilizers, irrigation and mechanization equipment for the cultivation of sunflowers increased considerably. On the whole, 12.5 percent more funds were spent per hectare during this period compared to 1975. And the yield of products per unit of space increased by 19.6 percent.

As a result of growth in the average yield for sunflower seed, the production cost per quintal of output decreased by 6 percent (from 10 to 9.41 rubles) and direct labor expenditures -- by 37.5 percent. As the production cost decreased, the production profitability rose to 140.8 percent. This signifies that 1.41 rubles of profit were obtained per ruble of expenditure. During more favorable years, the economic indicators for sunflower production are considerably higher.

The kolkhozes and sovkhoses in the North Osetian ASSR have considerable reserves at their disposal for further raising the economic efficiency of sunflower production. And here we should point out first of all the need for intensifying specialization and concentration in the production of oil-bearing seed.

The cultivation of sunflowers on irrigated land is extremely effective. In 1979 the per hectare yield for sunflowers grown under irrigation conditions in the republic was 14.1 /and for the entire area used for this crop -- only 10.6 quintals per hectare/.

Despite the above fact, less than 20 percent of the sunflower sowings at kolkhozes and sovkhoses in the North Osetian ASSR are on irrigated land.

In order to increase sunflower production, the industrial technology must be introduced into operations on a more extensive scale. The plans call for the industrial sunflower plantations to be increased to 6,000 hectares by 1985, compared to only 2,000 hectares in 1982. The average annual gross yields of oil-bearing seed during the 11th and 12th Five-Year Plans will increase from 6,200 to 10,000 tons and the yields -- from 9.6 to 14-16 quintals.

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MEASURES FOR CONTROLLING SPREAD OF BLACK SPOT DISEASE IN SUNFLOWERS

Moscow ZASHCHITA RASTENIY in Russian No 3, Mar 83 p 21

[Article by Ya.P. Brayko, chief of the Moldavian Quarantine Inspection and N.N. Raylyan, head of a laboratory: "Black Spot Disease in Sunflowers"]

[Text] Black spot disease in sunflowers (embelliziya) was recorded only recently in our country. The causative agent infects all of the above-ground parts of the plants. Dark brown spots which are lighter along the edges and which take various forms appear on the leaves, stalks and heads. Initially these spots are small and later they increase in size up to 2-3 centimeters in diameter. On the stalks they appear as dashes and imperfect ellipses 1-5 centimeters in size. On the calyx lobes the spots are brownish-black and at times concentric in shape; they are elliptically shaped on the petals, initially small and brown in color and subsequently merging with the color of the petals. The leaves and stalks are most vulnerable between the stages of milky and waxy ripeness.

In 1981, specialists attached to the plant quarantine service carried out a controlled inspection of Moldavian sunflower fields that has been sown using imported seed. A large number of specimens were delivered to the republic's quarantine laboratory for analysis. Seed having a changed coloring and a coating was selected for analysis. The specific affiliation of the fungus was determined under a microscope. In the absence of specific signs of the infection, a test-tube was half filled with damaged seed and plant impurities and thereafter some healthy grains were added. The test-tube was processed in a centrifuge and subsequently the sediment was examined under a microscope.

As a result, the causative agent of black spot in sunflowers was uncovered on four farms. The degree of infection turned out to be negligible -- 10-15 diseased plants per hectare. The fact that correct procedures were employed in defining the disease was confirmed by the Department of Identification and Arbitrary Analysis of VNITIKIZR.

Specialists attached to the inspection are monitoring the situation in a strict manner to ensure that the causative agent does not appear in domestic seed. The sunflower crop harvested at farms where the disease was noted was processed into oil at the Atakskiy Oil Extraction Plant (MEZ), with the oil cake being used for feeding to the livestock. The republic's northern regions

obtain their seed from the seed production zone (southern regions) and it is free of the infection.

During the first quarter of 1982, seed from 26 rayons throughout the republic was analyzed. Special attention was given to the seed obtained from seed production farms in five southern rayons (Vulkaneshtskiy, Kagulskiy, Tarakliyskiy, Chadyr-Lungskiy and Komratskiy), which specialize in the cultivation of seed for simple hybrids. The causative agent of embelliziya was not detected. Of the non-quarantine diseases, grey mould, alternaria blight and fusarial wilt were detected. Prior to sowing the sunflower seed was treated with a water suspension of 80 s.p. TMTD /tetramethylthiuram disulfide/ (2-3 kilograms per ton). During the growing season the specialists attached to the republic inspection and laboratory and rayon quarantine inspectors inspected the sunflower sowings and selected suspicious specimens for laboratory analysis. Defoliation has been carried out in all areas for the purpose of preventing the spread of moulds and for protecting the crop already cultivated. The causative agent of the disease was not observed in the republic in 1982.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

OVERVIEW OF 1983 SUNFLOWER HARVEST OPERATIONS

Moscow PRAVDA in Russian 29 Sep 83 p 1

/Article by S. Vladimirov: "Gifts of the Sunflower"/

/Text/ By the end of September, the crops had been harvested from many of the fields. The winter crops -- next year's grain -- were spread out in the form of a delicate green velvet cover. But the machine operators were still somewhat uneasy. Many products still remained to be shipped off to the country's granaries.

The grain harvest is nearing completion. The grain growers in the eastern regions are harvesting their grain from the last and most difficult hectares. The equipment is not being removed from the forage crop plantations. During the last week alone, the silage supplies increased by 28.6 million tons. The harvesting of vegetables and fruit is continuing. According to data supplied by the USSR TsSU /Central Statistical Administration/, by 26 September potatoes had been harvested from 2.5 million hectares. This work is being carried out at a high tempo in Bryansk and Moscow Oblasts -- the largest producers of the "secondary grain."

The harvesting of technical crops is in full swing out on the plantations. Sweet roots are being received and processed by hundreds of sugar plants. The beets have been harvested from 1.8 million hectares. In a number of areas the shipping of the products is being held up by irregular transport operations and by a lack of coordination between the farmers and the food industry workers. Here some influence must be exerted by the agroindustrial associations, who exercise control over the entire harvesting production line.

The RAPO's /rayon agroindustrial association/ in the cotton growing republics are undergoing a serious examination at the present time. The white harvest requires efficient interaction by the farmers and procurement specialists. The agroindustrial associations can accomplish a great deal towards raising the quality of the raw cotton and increasing the yield of fibre. Greater concern must be displayed for the harvesting rates.

The chief oil-bearing crop -- sunflowers -- has been harvested from two thirds of the areas. This year it was planted on 4.3 million hectares. Some time ago the farmers in a number of regions reduced the amount of attention they

were giving to sunflowers. At the present time, measures have been undertaken aimed at raising the yields for this crop. The sowing was carried out using better quality seed. One half of the sowings consist of early and rapid ripening varieties. High yield hybrids have been sown on roughly one tenth of the areas. One out of every four sunflower hectares is being cultivated using an industrial technology.

A decision is being made today as to how great will be the return from resources expended. The farms prepared approximately 80,000 combines for the harvest work, one half of which are equipped with the new PSP-1.5 attachments. The farmers are striving to ensure a production line for threshing the heads and also to reduce losses to a minimum. Importance is being attached to maintaining a high quality in the raw materials used for obtaining food oil.

The kolkhozes and sovkhoses in Moldavia carried out their harvest work in an efficient and organized manner. Thus the results were indeed high. An average of 25-27 quintals of oil-bearing seed was obtained in Glodyanskiy, Drokiyevskiy and Yedinetskiy Rayons. An even higher yield was obtained at the Kolkhoz imeni Kotovskiy in Vinnitsa Oblast. Here each hectare furnished 33.8 quintals of sunflowers.

Almost one half million tons of oil-bearing seed were delivered to receiving points in the Kuban. The sunflower crop was very generous in Leningrad, Timashevskiy, Ust-Labinskiy and Kavkazskiy Rayons. The crop was harvested and shipped to the granary earlier than usual.

The development of advanced agricultural practices and the introduction of hybrids made it possible to reduce the risk of damage to the plants by diseases. However, the danger of such damage was not eliminated entirely. Thus, within the complex of harvesting operations to be carried out, an important role must be played by cultivation of those sowings which accelerate the ripening of the heads. This method is being employed successfully by many farms. But it is being neglected at a number of kolkhozes and sovkhoses. This applies in particular to Voronezh Oblast and the Bashkir ASSR.

Specialists attached to the USSR Minsel'khoz [Ministry of Agriculture] are of the opinion that the majority of farms are capable of carrying out their sunflower harvesting work in just 5-6 days. At the Belgorod Rassvet Kolkhoz, in Prokhladnenskiy Rayon in the Kabardino-Balkarsk ASSR and in many rayons in Odessa Oblast, success was achieved in completing the work within just such a time frame. Moreover, in addition to threshing the seed, they also succeeded in cleaning the seed in advance on the threshing floors before shipping it to the procurement specialists. Naturally, the leading workers have no secrets. Everything is dependent upon skilful and well thought out organization of the work.

But there are problems of another type. Quite often the harvest work is dragged out for 30-40 days in Penza, Kuybyshev and certain other oblasts. Such delays can be explained on the basis of organizational disorder alone. For example, the farms in Tambov Oblast have at their disposal almost 2,000 combines, all of which are equipped with production attachments for removing the heads. Last week, notwithstanding the fact that the weather was dry, the output per hectare here did not exceed 1.3 quintals -- considerably less than the norm.

The farmers in Rostov Oblast are also open to criticism. The work volumes here are great. Sunflowers are grown on 404,000 hectares. Yet the rates for threshing the heads are the lowest in the north Caucasus. Many combine operators are not coping with their shift tasks. Meanwhile, the period of bad autumn weather is approaching and this raises the threat of losses.

According to data supplied by the All-Union Scientific-Research Institute of Oil-Bearing Crops, a delay of just 3 days in carrying out the threshing work in the Volga region can result in a shortfall in yield of 1.1 percent. A delay of 15 days -- losses amounting to 29.5 percent of the crop grown. Thus it is difficult to understand why the field crop growers in certain regions have still not commenced their mass harvesting work. This work is proceeding very slowly on fields in Kazakhstan and the Altay Kray.

The agroindustrial associations must exercise control over the threshing as well as the procurement and processing of the seed. Incidents are being encountered of the products being left outdoors at the grain receiving enterprises. This amounts to deliberate losses of oil. It is important for all partners to join in the competition to obtain high final results. The experience accumulated in collaboration between the field crop growers and workers attached to processing enterprises, all of whom accept joint responsibility for obtaining the finished oil, must be disseminated on a more extensive scale.

Autumn is making its presence known in a more persistent manner. Fine days are at a premium. The farmers must hasten in their efforts to harvest and preserve all of the riches being offered up by the fields.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

NEW SUGAR BEET VARIETY--This spring on the sugar beet field of Ternopol Oblast (it occupies 118,000 hectares) did not resemble previous springs. The experience of farms in Podvolochisskiy Rayon was popularized further. There it was not only possible to develop an industrial technology of production of raw materials for the sugar industry eliminating manual labor, but also to demonstrate that detachments of machine operators on full cost accounting, which also include technologists, could grow programmed harvests. As stated at the June (1983) Plenum of the CPSU Central Committee, this makes it possible to utilize the production and scientific and technical potential of the sector most sensibly and to overcome the lag rapidly. In the oblast this year sugar beets are cultivated according to industrial technology on 46,800 hectares. About 500 series seeders improved with colters for the embedding of one-germ seeds at a specified density have been reequipped, which has eliminated manual thinning. A total of 18,500 hectares are occupied with the new veselopodolyanskiy-29 variety with an increased sugar content. The enterprises of the Agricultural Equipment Association have set up the manufacture of devices making it possible to do without a manual removal of tops from roots. /Excerpt/ /Moscow IZVESTIYA in Russian 30 Jun 83 p 17 11,439

NEW CULTIVATION TECHNOLOGY--The efficient technology of cultivation of seed plants of sugar beets without transplants proposed by Ukrainian scientists has come out from experimental plots to production tracts. Today specialized farms in Crimean and Odessa Oblasts have begun to dispatch the seeds gathered from such plantations for further processing. For example, on the Beregovoy Sovkhoz the harvest of seeds per hectare reaches 25 quintals. The development of the new technology is envisaged by the Sakhar /Sugar/ overall scientific and technical program implemented in the republic. The climatic conditions of southern regions make it possible to establish nurseries in the summer and not to dig out root crops for the winter. At the same time, labor expenditures are reduced to one-third and the seed production cycle, by a whole year. /Text/ /Vilnius SOVETSKAYA LITVA in Russian 6 Aug 83 p 17 11,439

DIGGING OF BEET ROOTS--Kiev, 23 Aug (TASS)--The harvesting campaign on the sugar beet plantations of the Ukraine has been opened by one of the leading sugar beet planting oblasts--Kiev Oblast--where a selective digging of roots has begun. Today motor vehicle drivers have delivered the first batches of raw materials of the new harvest to processing enterprises. Sugar beet growers in Kiev Oblast plan to conclude the digging of roots on 24 October and their carting, before 31 October. /Excerpts/ /Moscow SEL'SKAYA ZHIZN' in Russian 24 Aug 83 p 17 11,439

MEETING ON BEET PRODUCTION--Vinnitsa, 6 Aug (RATAU)--A significant gain in the sugar beet harvest and an increase in finished output per hectare of plantations in the republic are to be obtained through the introduction of scientific achievements. Some of them already give a practical return; for example, the yubileynny hybrid developed by the breeders of the Sakhsvekla Scientific Production Association. In accordance with the republic Sakhar goal-oriented scientific and technical program the new hybrid has been regionalized in eight oblasts. Next year the areas under it will be expanded, exceeding $\frac{1}{2}$ million hectares. The yubileynny variety, along with a high productivity, has a good germinative capacity. It is a one-seed variety, which makes it possible to widely utilize the industrial technology of cultivation of this crop. Several promising varieties and hybrids are to be introduced in the republic by the end of the five-year plan. The potentials for an increase in the efficiency of sugar beet production on the basis of scientific and technical progress were discussed at a 2-day expanded meeting of the council of the North-Western Scientific Center of the Ukrainian SSR Academy of Sciences and of the scientific coordinating council at the Vinnitsa Oblast Party Committee that has ended today. Scientists from the Sakhsvekla Scientific Production Association, the Sakhar Scientific Production Association and institutes of the Ukrainian SSR Academy of Sciences, party, Soviet and economic workers from oblasts in the republic's north-western region and specialists from a number of farms participated in the meeting. They became acquainted with the results of selection work of the Uladovo-Lyulinetskaya Experimental Selection Station and with the experience in labor cooperation of sugar beet growers and sugar refiners in Yampolskiy Rayon. The adopted recommendations envisage a set of measures for strain renovation and improvement in the machine technology of cultivation and processing of sugar beets. L. L. Krivoruchko, first secretary of the Vinnitsa Oblast Party Committee, spoke at the meeting. [Text] /Kiev PRAVDA UKRAINY in Russian 7 Aug 83 p 3/ 11,439

POTATO HARVESTING DELAYS CRITICIZED--The potato harvesting equipment existing in this republic should enable the farms to harvest potatoes from 18,000-20,000 hectares daily. At such a pace of operation the harvesting of the "second bread" should take not more than 20 days. Actually, however, 11,000-12,000 hectares are being harvested daily in this republic. Although 2 weeks have already elapsed since the mass harvesting of potatoes began, less than half of the area planted with potatoes has so far been harvested. [Text] [Minsk SEL'SKAYA ZHIZN' in Russian 15 Sep 83 p 1] 1386

MOGILEV, VITEBSK OBLASTS' POTATO HARVESTING--The potato growers in the Mogilev and Vitebsk oblasts are slow to join in the harvesting drive. Few hectares under potatoes have been harvested so far in the Goret'skiy and Mstislav'skiy rayons. This "second bread" is also being slowly harvested on farms in the Baranovich'skiy, Vetkov'skiy, Il'yev'skiy and Ostrovetskiy rayons. [Text] [Minsk SEL'SKAYA GAZETA in Russian 11 Sep 83 p 11] 1386

KURSK BEET HARVEST--Kursk, 23 September--Beet growers in the oblast have sold their first million tons of sugar beets to the state. They bring more than 100,000 tons of beets to receiving points every day. Farms in Oktyabr'skiy Rayon have fulfilled two-thirds of the plan for procuring raw materials for the sugar industry. The kolkhozes and sovkhoses of Sovetskiy, Kurchatov'skiy, and a number of other rayons are also transporting sugar beets at a fast rate. [by A. Trubnikov] [Excerpt] [Moscow SEL'SKAYA ZHIZN' in Russian 24 Sep 83 p 1] 12424

KAZAN BEET HARVEST--Mass harvesting of sugar beets has begun at farms in Tataria. In order to improve the efficiency of work of the combines, machine operators with the help of specialized cultivators conducted pre-harvest loosening of the soil. Farmers in Buinskiy Rayon who fulfill norms by 1.5 times daily set the tone in competition. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 16 Sep 83 p 1] 12424

PENZA BEET HARVEST--A large batch of sugar from beets of the new harvest was produced at processing plants in the oblast. This year the sugar refining season began a week earlier than usual. Both farmers and processors are rejoicing over the harvest: the weight of incoming beets is up to 500 grams. The by-products of production -- beet pulp-- are being used efficiently also. The first shipments of this valuable supplement for livestock have arrived at stock farms. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 9 Sep 83 p 1] 12424

TENDING SUNFLOWER CROP--Kiev, 14 Jun--One of the country's largest sunflower plantations (more than 1.5 million hectares) is in the Ukraine. All-round mechanized detachments, many of which have converted over to the group contract method, are now engaged in carrying out their second treatment of the crops. The group use of equipment is making it possible to carry out the work on an abbreviated schedule basis. The farmers are introducing new technologies which will ensure optimum conditions for the development of the plants. For example, on many farms in Odessa and Zaporozhye Oblasts the seed is placed in the soil using 8-row sowing machines. This now makes it possible to employ caterpillar tractors with wide-swath cultivators for tending the crops. The productivity of such units is twice as high as that for conventional machines. In addition, they do not pack the soil down as much. The collectives of leading farms and processing enterprises throughout the republic are jointly campaigning to obtain a yield of not less than 1 ton of oil per hectare. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 15 Jun 83 p 1] 7026

SUNFLOWER HARVEST PREPARATIONS--Thorough preparations have been made in Kherson Oblast for harvesting an important technical crop. Towards this end, approximately 1,200 grain combines were re-equipped. Labor organization for the machine operators is based upon use of the group contract method. In order to accelerate and "smooth out" the drying out of the heads and thus improve their threshing, a special operation is being carried out over considerable areas--treating the crops with special chemical substances. [by P. Buchel'] [Excerpt] [Kiev PRAVDA UKRAINY in Russian 12 Jun 83 p 1] 7026

LARGEST SUNFLOWER PLANTATION--The country's largest sunflower plantation -- more than 1.5 million hectares -- is in the Ukraine. The collectives of all-round mechanized detachments, many of which have converted over to the brigade contract method, are presently carefully tending the sowings of this crop. The group use of equipment is making it possible to carry out the work on an abbreviated schedule basis. The farmers have selected a technology which ensures optimum conditions for the development of the plants. On many farms in Odessa and Zaporozhye Oblasts, for example, the sunflower seed has been placed in the soil using 8-row sowing machines. This is making it possible to use caterpillar tractors with wide-swath cultivators out on the fields. The productivity of such units is twice as high as that of conventional machines. In addition, they do not pack the soil down quite so much. Cracks do not form

on a well loosened surface, there is less moisture evaporation and rain water is absorbed better and "works" more reliably in behalf of the crop. The plantations in Kirovograd and Kharkov Oblasts have been cultivated very well. The machine operators here have already carried out the second loosening of the inter-row spacings on one half of the tracts. In maintaining their sunflowers free of weeds, similar to other row crops, the farms are receiving assistance from their patrons -- workers from industrial enterprises, office workers from rayon and municipal institutes and organizations, pensioners, housewives and senior students. The second mass cultivation of the sowings of this oil-bearing crop is now unfolding throughout the entire republic. /by T. Arkushenko/ /Text/ /Kiev PRAVDA UKRAINY in Russian 12 Jun 83 p 1/ 7026

UKRAINIAN SUNFLOWER HARVEST--Kiev--Yesterday the farms in the Ukraine commenced their mass harvesting of sunflowers. Approximately 20,000 combines equipped with special attachments were moved out onto the fields. This will make it possible not only to accelerate the work tempo but also to reduce losses considerably. /Text/ /Moscow TRUD in Russian 11 Sep 83 p 1/ 7026

SALES PLAN FULFILLED--Zaporozhye, 3 Oct--The Zaporozhye sunflower field is the largest in the Ukraine: it occupies approximately 200,000 hectares. At the present time, the harvest work is nearing completion on this field. This year has turned out to be an unfavorable one for this oil-bearing crop and the rural machine operators are striving to harvest the entire crop without losses. The collective at the Mokryanka Sovkhoz has successfully fulfilled its plan for selling oil-bearing seed to the state. More than 20 quintals have been obtained from each hectare here. An even greater yield -- 23-24 quintals -- was obtained at the Druzhba Sovkhoz. And at the Petromikhaevskiy Sovkhoz the yield is reaching 25-27 quintals. This represents more than a ton of oil per hectare. /by N. Ivanchenko/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 4 Oct 83 p 1/ 7026

KRASNODAR KRAY SUNFLOWER YIELDS--Each year sunflowers are grown on 8.2 percent of the arable land at our kolkhozes and sovkhozes. It would seem that it should not be too difficult to maintain a correct crop rotation plan and to observe a pause in the cultivation of this crop on the same field of not less than 8-10 years. However, a considerable amount of effort must be expended in order to be able to follow this requirement in a firm manner. Compared to the 9th Five-Year Plan when the average sunflower yield for Timashevskiy Rayon was 23.1 quintals of seed per hectare, during the 10th -- 24.3 and the average for 2 years of the 11th Five-Year Plan -- 26.2, including 29.4 quintals in 1982. Last year the gross yield of seed increased by 3,330 tons compared to the average annual yield during the 9th Five-Year Plan. This represented an increase of 12 percent. During this period the sale of seed to the state increased by 3,478 tons -- or by almost 20 percent. It is apparent that the sunflower crop possesses great potential. But only true masters of farming are taking proper advantage of this potential. We recall the advice of our remarkable fellow countryman Academician V.S. Pustovoyt and we will always strive to follow it. /by V. Samoylov, chairman of the council for the Timashevskiy Rayon Agroindustrial Association in Krasnodar Kray/ /Excerpts/ /Krasnodar SEL'SKIYE ZORI in Russian No 9, Sep 83 pp 14-16/ [COPYRIGHT: "Selskiye zori", 1983] 7026

SUNFLOWER HARVEST COMPLETED--Krasnodar-- The harvesting of sunflowers has been completed in the Kuban region. An average of almost 20 quintals of oil-bearing

seed has been obtained from each hectare and at leading farms -- up to 30 or more quintals. /Text/ /Moscow TRUD in Russian 1 Oct 83 p 1/ 7026

UNSATISFACTORY SUNFLOWER PRODUCTION--In the all-union division of labor, our republic occupies an important place in the production of oil-bearing seed and especially simple hybrids for both itself and other regions of the country. Over a period of many years now, the leader in obtaining high sunflower yields has been Glodyanskiy Rayon, which last year obtained 28 quintals. Roughly 22.7-23.9 quintals of oil-bearing seed were obtained in Lazovskiy and Drokiyevskiy Rayons. Even higher indicators have been achieved by individual farms. Despite all this however, the status of affairs in the production of oil-bearing seed remains unsatisfactory. This is borne out by the fact that over a period of a number of years the republic has not fulfilled its plans for the production and procurement of this valuable crop. As a result of insufficient sowing and low planning and technological discipline, the farms in Nisporenskiy, Bessarabskiy, Kotovski, Tarakliyskiy, Chimishliyskiy, Grigoriopol'skiy and Novoanenskiy Rayons did not fulfill their plans for producing and selling oil-bearing seed to the state. /Excerpt/ /Kishinev SEL'SKOYE KHOZYAYSTVO MOLDAVII in Russian No 1, Jan 83 pp 2-3/
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SUNFLOWER SEED PROCESSING--Kishinev--The Moldraszhirmasloprom Association has commenced processing sunflower seed from the new crop. The shipping of finished products began yesterday. Prior to the end of the year, the association will have processed in excess of 50,000 tons of vegetable oil. /Text/ /Moscow TRUD in Russian 2 Sep 83 p 1/ 7026

HYBRID SUNFLOWER SEED--Kishinev, 22 Oct--This year the field workers in Drokiyevskiy and Glodyanskiy Rayons have developed a fine crop of sunflowers: they obtained 27.9-29.2 quintals of oil-bearing seed from each of 6,500 hectares. And farmers at the Moldova Sochialiste Kolkhoz in Drokiyevskiy Rayon obtained 36 quintals. This result became possible through the use of simple hybrids, used in place of such earlier regionalized sunflower varieties as Odesskiy-63 and VNIIMK-1646. The new arrivals are distinguished by a higher productivity and rapid ripening, factors which are very important for mechanized harvesting since they reduce crop losses sharply. At the present time, a large specialized zone is being created in the southern part of the republic for the production of hybrid sunflower seed. Last year the initial hundreds of quintals of seed were obtained from hybridization tracts in Komratskiy, Chadyr-Lungskiy and Vulkaneshtskiy Rayons. And this year more than 3,500 tons of such seed have been produced. The processing of the seed is being carried out at a rapid tempo. Next year the hybrid seed will be made available to all farms in Moldavia and also to many rayons in the Ukraine and the Russian Federation. /by N. Marfin/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 23 Oct 83 p 2/ 7026

TAMBOV BEET HARVEST--Having for the most part completed the harvesting of grain, farmers in the Tambov region have begun to harvest sugar beets. This year 117,000 hectares were planted in sugar beets. According to estimates of specialists, the yield will be higher than last year. The processing base was well prepared to receive the crop and an additional 10 receiving points were opened. [by V. Kolobov] /Text/ [Moscow SOVETSKAYA ROSSIYA in Russian 30 Aug 83 p 1] 12424

KIEV BEET HARVEST--The harvesting season is picking up speed at the beet plantations in the Ukraine, which are the largest in the country. Farms in all oblasts of the republic are already working. They have harvested 160,000 hectares of beets. The long-range "Sugar" program which is being implemented in the republic determines the rhythm of the field-to-plant production chain and coordination of partners' actions throughout the agroindustrial complex. Ukrainian beet growers have applied a great deal of effort to raising the harvest. In collaboration with transport workers they plan to deliver 50 million tons of sugar beets for processing. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 8 Sep 83 p 1] 12424

UKRAINE SUGAR BEET HARVEST BEGINS--The harvesting season on the Ukraine's sugar beet fields was started by a leading sugar beet oblast--Kiev Oblast, where selective digging of the beets has commenced. Yesterday truck drivers delivered the first shipments of the raw material from the new harvest to processing enterprises. The farmers of Kiev Oblast strive to conduct all operations comprehensively and smoothly, utilizing the grain-reaping experience. For the current season 240 combined-skills teams of equipment operators have been organized. Most of the harvesting combines placed at their disposal are six-row KS-6 and RKS-6 ones. The teams were provided with loaders and means of transport adapted to the capacity of these combines. Enterprises of the UkSSR Ministry of Motor Transport and the "Sel-khoztekhnika" Agricultural Equipment Association as well as industrial enterprises of the republic's capital city will provide considerable assistance in transporting the sugar beets. [Text] [Kiev PRAVDA UKRAINY in Russian 25 Aug 83 p 1] 1386

UKRAINE BEET HARVESTING ACCELERATES--Kiev. Harvesting operations on the Ukrainian sugar beet plantation, the largest in the country, are gaining momentum. Farms in all the oblasts of the republic already have commenced these operations. Beets have been harvested on 160,000 hectares. The smooth operation of the "conveyor line" leading from the field to the factory and the coordinated action of the partners in the agroindustrial complex follow the long-range targeted "Sugar" Program being implemented in this republic. Ukrainian sugar beet growers have exerted considerable effort to grow this harvest. In cooperation with transport personnel, they plan to provide 50 million tons of this raw material to sugar factories for processing. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 8 Sep 83 p 1] 1386

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LIVESTOCK

PROBLEMS, TASKS OF CATTLE REPRODUCTION IN RSFSR DISCUSSED

Moscow SEL'SKOYE KHOZYAYSTVO ROSSII in Russian No 10, Oct 83 pp 2-3

[Article by G. Ogryzkin, RSFSR Deputy Minister of Agriculture: "The Better the Herd -- the Higher the Productivity"]

[Text] To increase the milk yield per cow and to raise the average daily weight increases and the delivery weight conditions for cattle -- such are the principal tasks confronting the livestock breeders of Russia today. In order to solve these tasks, it is necessary not only to strengthen the feed base but also to implement improvements in the productive qualities of the animals and in the reproduction of the herd and also to improve the safeguarding of the young stock.

From year to year many kolkhozes and sovkhoses are achieving high indicators in the use of the brood stock. In 1982, almost 4,000 farms obtained 90 calves from every 100 cows and 500 farms -- 100 or more.

At the same time, in critically evaluating the work associated with reproduction of the herd it must be confessed that by no means have all of the necessary measures been taken. Last year, eight percent of the farms obtained less than 60 calves per 100 cows. In particular, the kolkhozes and sovkhoses in the Tuva and Kalmyk ASSR's and in Smolensk, Tambov, Rostov, Chita and Ryazan Oblasts are carrying out very unsatisfactory work with their brood cattle stock.

Nor can a situation in which many kolkhozes and sovkhoses carry out their principal culling out of brood stock during the first quarter of the year be considered normal. Many cows are being delivered during this period on farms in Kurgan, Magadan, Kalinin, Kaliningrad and Sakhalin Oblasts, in the Kabardino-Balkarsk ASSR and in Khabarovsk Kray. And indeed the holding over of cows until the end of the year for the sake of an imagined improvement in their condition causes harm to the work: feed is consumed in an inefficient manner and unproductive use is made of both labor resources and facilities.

Many farms lose offspring owing to crude violations of the cattle maintenance procedures and a shortage of maternity departments and veterinary dispensaries. In Amur and Chita Oblasts, for example, 18 percent of the calves were lost owing to these factors and in Irkutsk Oblast and the Altay Kray -- 17 percent.

Shortcomings in the area of veterinary services are causing harm to herd reproduction operations. Many farms lack sanitary areas, isolation wards and disinfection enclosures.

Gosplemobs'yedineniye elements are not carrying out the artificial insemination of the animals in the required volumes and the kolkhozes and sovkhozes, counting upon their assistance, are quite often failing to devote serious attention to this work.

Concern is being aroused over the status of affairs with regard to the raising of replacement young stock. Today this is the number one problem. If not solved, no substantial increase can be expected in the dairy productivity of the cows. Meanwhile, the growth and development of the replacement young stock on many farms is lagging considerably behind the standard for a strain and also behind the normative indicators for a particular zone. As a result, the average age for the first calving is higher than the optimum age by 4-5 months and this serves to increase the period of unproductive use of the animals by 12-15 percent.

As a result of the poor development of replacement young stock at the kolkhozes and sovkhozes, 30 percent of the heifers more than 2 years of age remain non-inseminated and on farms in the Dagestan and Kabardino-Balkar ASSR's and in Primorskiy Kray -- more than 60 percent.

It is for this same reason that the proportion of cows in the cattle herd has fallen to 35 percent. Cows constitute less than 30 percent of the herd in Kurgan Oblast and 33-34 percent -- in Kursk, Volgograd and Kuybyshev Oblasts. Meanwhile, the proportion of cows in a herd in suburban zones of the republic must be no lower than 60-65 percent.

Specialized farms are providing only weak assistance in solving the problem concerned with replacement young stock. By no means has a stable feed base been created at all of the specialized farms, the average daily weight increases for heifers remain low and the numbers being raised are negligible.

In order to correct the situation, the structure of the area under crops must be re-examined once again at the specialized farms, the farms must be released from having to fulfill the planned obligations for supplying the state with products which are not related to their principal production activity and greater demands and responsibilities must be imposed upon the farm leaders and specialists. At the same time, work must be completed this year on the creation of specialized farms for the raising of replacement young stock at kolkhozes and sovkhozes.

In solving the problems under discussion, serious attention must be given to improving the organization of labor and production administration. One progressive method for raising the efficiency of animal husbandry operations is that of separate-group maintenance of the cattle, with their physiological condition and productivity being taken into account. In dairy cattle husbandry, the new technology is referred to as a flow line-departmental system for milk production. It is based upon intra-farm specialization and departmental organization of labor. Prior to the beginning of 1983, this technology was employed by almost 4,000 farms having 2.5 million cows.

The advantages of the technology are well known. The farms which employ it obtain 300-400 more kilograms in their milk yields and 3-4 percent more calves. But this system produces positive results only in those instances where its introduction into operations is preceded by thorough preparations -- the selection and training of personnel, creation of a strong feed base and livestock maintenance conditions which conform to their physiological state.

During the next few years it will be necessary to raise considerably the productivity of pedigree animals and expand the network of breeding farms in a number of zones, especially in the Urals and Siberia. The importance of this task is emphasized by the fact that the rates for improving the strains being bred, through the use of highly valuable bulls, are entirely and completely dependent upon the availability of a good breeding base.

Serious attention is being given to the work of the breeding farms in a number of oblasts, krais and autonomous republics. In Leningrad Oblast, for example, solutions have been found for all practical purposes for those problems associated with the organizational-economic strengthening of the breeding farms. Their production activity is directed towards solving the principal task -- the raising and sale of pedigree young stock. The farming branch is concerned with ensuring that animal husbandry is supplied with rich feed.

The workers in Leningrad Oblast achieved a fine solution for the problem of managing these farms. All of the leading plants are combined into one specialized administration, which is directly subordinate to the oblast agricultural organs. At the present time, in addition to completely satisfying the oblast's requirements for pedigree animals, the breeding farms are also selling high quality pedigree products to all regions of the country.

As a result of the successful carrying out of a plan for breeding measures, a highly productive herd of black-variegated cattle has been created at the Petrovskiy Sovkhoz. In 1982, an average of 6,360 kilograms of milk was obtained from each of 1,040 cows here. The fat content was 3.8 percent. And milkmaids L. Baburina and A. Petrova obtained an average of 7,345 kilograms of milk per cow from an enlarged group (54 head).

The best bulls were used on the farm, the daughters of which are obtaining 5,400-5,700 kilograms during the first lactation. As a result of purposeful breeding work, the breeding plant succeeded in creating a number of families having a large number and high genetic value. The best cows in a number of the families furnished more than 300 kilograms of milk fat during lactation. For example, over a period of 330 days of its sixth lactation, an Ebba cow produced 10,169 kilograms of milk having a fat content of 3.63 percent.

The breeding farms have exerted a great influence with regard to improving the oblast's commodity herds.

The breeding plants and breeding sovkhozes in Moscow, Sverdlovsk, Chelyabinsk and Kirov Oblasts completed their operations last year with fine results. They increased their milk yields by 200-250 kilograms and obtained an average of 3,500-4,800 kilograms of milk per cow.

However the work of many breeding farms can by no means be viewed as being satisfactory.

Based upon the results for 1982, the productivity of cows at breeding plants throughout the republic was only 3,662 kilograms and at breeding farms in Kaliningrad Oblast -- 2,701, Maritime Kray -- 1,488 and Yaroslavl Oblast -- 2,344 kilograms.

For example, let us take the Breeding Plant imeni XVII Parts"yezda in Orel Oblast -- a farm having a comparatively good cow productivity, high grain and forage crop yields and a stable collective of livestock breeders and specialists. The sovkhoz has a good supply of equipment, each year it uses more than 1 million rubles worth of capital investments and it is building many housing units. However the productivity of the cows has remained at practically the same level over the past 5 years. In 1982 it amounted to 3,870 kilograms.

The work of the breeding farms must be subordinated to solving the principal tasks -- improving the strains of the agricultural animals being bred and raising and selling valuable pedigree young stock. These problems will be solved -- milk and meat will be available. In addition, considerably more pedigree animals will be raised for the purpose of adding to the commodity herds and industrial complexes. The initiative displayed in solving these problems is entirely and completely dependent upon the local agricultural organs.

Unfortunately, such initiative is by no means being displayed in all areas. It is by no means an accident that over the past few years many breeding farms have for all practical purposes forfeited their mission. In 1953, at the Krasnyy Oktyabr' State Breeding Plant in Yaroslavl Oblast (it breeds the Yaroslavl strain of cattle), an average yield of 4,649 kilograms of milk was obtained per cow and in 1982 -- only 1,715 kilograms. The Sychevka State Breeding Plant in Smolensk Oblast, during the course of breeding the Sychevka strain of cattle over the past 15 years, has been transformed into a farm having an average cattle productivity.

It is known that the foundation for breeding work is the selection and intensive use of valuable bulls. This is the foundation for successful breeding work, for the selection of bulls over the course of one generation produces the same breeding effect as does a very strict selection of cows over a period of six generations. Thus the raising and checking of bulls in all areas for their productivity and the quality of their offspring and the use for reproduction purposes of the more valuable bulls is considered to be a vital task.

During the 1970's, with the development of the deep freezing technology for the semen of bulls, considerably greater attention began to be given to the work of evaluating bulls. Over the past 5 years, 11,500 bulls have been checked and evaluated. In the storehouses of breeding enterprises there are 134 million dosages of semen from checked bulls and 34.5 million dosages from evaluated bulls, of which amount 12 million dosages are from improvement bulls. Unfortunately, satisfactory work is not being carried out in the

oblasts, krays and autonomous republics in the evaluation of bulls. In 1982, only 37 percent of the cows and heifers were inseminated using the semen of evaluated bulls, including semen from improvement bulls -- 16 percent.

Many state breeding associations have been criticized for their unsatisfactory work in increasing the individual milk yields of mature and promising cows and adding bulls to the cow groups. This work is important and if neglected there may not be bulls available for improving the herd.

Instead of organizing this work on site, many oblasts, krays and autonomous republics import bulls on the side and at times these animals are of unplanned lines and of low quality. At the same time, poor use is being made of the semen of evaluated bulls, available in the oblasts.

More than 30 strains of cattle are presently being bred in the Russian Federation. The following strains are being employed most extensively: Simental'skaya (32 percent), black-variegated (22), Krasnaya Stepnaya (14), Kholmogorskaya (6.4), Shvitskaya (5.5) and Bestuzhevskaya (5). They constitute 85 percent of the overall number of pedigree cattle.

The domestic strains of cattle are distinguished by high milk productivity, strong constitutions and good meat qualities. On the best farms the milk yields exceed 5,000 kilograms and the yields of champions -- 10,000-12,000 kilograms of milk during a lactation.

However, not all of the strains meet the requirements for the intensive carrying out of animal husbandry operations or for an industrial technology.

Towards this end, work has been carried out for a period of more than 20 years aimed at improving our domestic cattle. On farms in the RSFSR, cattle of the Anglersk, Ayrshir, Shvitskaya, Gollandskaya and Holstein-Friesian strains have been imported. As a result of their use, the productivity of 1st generation hybrids is being raised by 10-20 percent, with the shape and properties of the udder being improved noticeably.

However, despite the positive results, the work concerned with improving the productive and technological qualities of the domestic strains is still proceeding slowly. The imported cattle are being utilized in an unsatisfactory manner in a number of areas. Optimum maintenance conditions are not being created for these animals in all areas and very few pedigree young stock are being raised by means of reproduction.

The state breeding associations and the agricultural organs in the various areas must restore order in the use of imported cattle. Such animals can be culled out only with the permission of the State Breeding Service and bulls -- only following an examination of materials at Rosplemob"yedineniye.

There is still one other concern. Many state breeding associations are making very poor use of the available supplies of semen obtained from bulls of highly productive imported strains. For example, in the storehouses of breeding enterprises in Moscow Oblast there are approximately 1 million dosages of semen from Black-variegated and Holstein-Friesian bulls, the cows of which have

a productivity of 8,725 kilograms of milk with a fat content of 4.23 percent. But in 1982 this semen was used for inseminating only 24,200 cows and heifers.

One important problem is that of ensuring efficient use of the strains. In recent years the diversity of these strains has started to restrain the development of breeding and animal husbandry operations. Yes and how is it possible to organize the breeding of animals intelligently and achieve success in breeding work when 12 dairy strains are being employed in Rostov Oblast and nine in Tula and Kirov Oblasts? It would be more correct if each oblast, kray or autonomous republic bred just one, or at the most, two strains.

The above generally describes the problems associated with improving the herd for our farms. In the final analysis, successful work throughout the entire animal husbandry branch is dependent upon efficient and interesting solutions being found for these problems.

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LIVESTOCK

PROBLEMS OF HOGBREEDING IN INDUSTRIAL COMPLEXES

Moscow SVINOVODSTVO in Russian No 10, Oct 83 pp 4-7

[Article, under the rubric "The Food Program is Everyone's Affair", written by A. Deryabin, chief of the USSR Main Administration of Livestock Production on an Industrial Basis [Glavzhivprom] and candidate of economic sciences: "Under Conditions of Industrial Technology"]

[Text] Increases in pork production during the present five-year plan, in accordance with decisions taken by both party and government, are to be effected by an intense development of the sector: expansion of production capabilities on industrial hog enterprises; transformation of sovkhoz sub-units onto an industrial basis; introduction of highly productive new breeds and species and the breeding of hybrids that meet the demands of industrial technology; a guaranteed feed supply for all categories of hog farms.

At the present time there are several hundred hog complexes in the country, and last year they supplied the state 1,240.6 thousand tons of pork (live weight).

Complexes and farms with industrial technology are responsible for 50-90 percent of all locally produced pork in the following areas: UkSSR, ArSSR, Komi ASSR, Khabarovsk Kray, Vladimir, Kostroma, Belgorod, Tambov, Chelyabinsk, Kemerovo, Novosibirsk, Gorkiy, Omsk, Chita and other oblasts.

The 1982 average daily weight gain on complexes during the breeding and fattening processes was 438 grams, 113 grams more than on other state farms, and the outlays per centner of weight gain were 6.2 centners of feed units and 8.3 man-hours. The cost per centner of weight gain was R60 cheaper.

The profit on hog complexes will permit the capital funds used for construction to be replenished with two-three years.

Even higher indices for animal productivity are reached on state complexes for breeding and fattening that have 54,000 and 108,000 hogs a year. Herds from individual sows have a 35 percent higher intensity use, while the productivity of hogs being bred and fattened is 74 percent higher. Some 3.1 centners of feed units, 20.5 man-hours and R50 of productive expenses are saved on each centner of weight gained.

It is the technology that brings about the efficiency in industrial enterprises; it ensures rhythm and continuity of production, combined handling of animals of a similar age group, the mechanization of all productive enterprises and the optimal microclimate in facilities. This latter ensures an intensive use of the animals' biological peculiarities, a high return on feed, good growth and reduced fattening periods.

It is only because of the introduction of industrial technology that hog complexes in 1982, in comparison to the indices for kolkhoze and sovkhos sub-units, were able to attain an additional weight gain (live weight) of 430,000 tons for similar herds, a savings of about 3 million tons of feed units and 22 million man-hours. These complexes showed a profit of R345 million from the production of pork.

One opinion holds that if average hog farms only had enough concentrated feed, then they would reach high levels of efficiency in hog production. But that's not really so. Apart from feed, it is high-quality production technology that ensures good weight gains. Where traditional methods of hog raising are practiced, it is difficult to get good results. As an example, the Krasnoye Znamya Pedigree Farm of Penza Oblast and the Pissarëvshchina State Pedigree Farm of Mogilev Oblast both have enough concentrated feed; 9 centners of feed concentrate units yield 1 centner of weight gain, and the average daily weight gain is 304 and 232 grams respectively.

Our country's hog breeding sector has an entire series of standardized projects : complexes for raising and fattening 108,000, 54,000 and 12,000 hogs per year; a hybrid center for the production of 18,100 hogs per year for the replacement herd; and pedigree breeding farms for the larger complexes. There are also projects for mechanized farms with industrial technology for 6,000-9,000 animals. Standardized projects are also being worked out for 108,000 and 54,000 animals per year based on the model for 27,000 head. This means that complexes of various sizes will be able to use the same technical equipment, to bring facilities into operation one at a time, to greatly reduce construction time and to reduce the time necessary to reach productive capacity.

The UkSSR Scientific-Research Institute for Agriculture on an Industrial Basis has worked out a standardized project for 12,000- and 24,000-head complexes (802-01-1, 802-01-02) which will introduce industrial technology into kolkhozes and sovkhos. On these complexes the hogs will be given concentrated green and succulent feeds and also food wastes; standardized equipment will be used.

All of this will allow hog production operations on farms everywhere to be run on an industrial basis. Right now these farms produce 70 percent of the pork. This means that the issues of farm reconstruction, expansion and industrial technology are critical.

To ensure increased meat production and greater effects of scientific and technological progress on the pace of development of modern production, there must be continuous improvements in the education and in the work qualifications of all those in the livestock sector.

During the time these complexes have been in operation many specialists and other skilled workers have received training at both secondary and higher-level institutes, at agricultural institutes of professional and vocational education, and in special courses. Since 1974 more than 6,000 specialists and other workers have been sent to these complexes, including more than 600 in 1982. Several of the larger enterprises have schools and also courses for specialists.

Indices of work performance of the best collectives testify to the sector's huge potential, this inherent in the farm complexes. This potential is not fully exploited on many enterprises, and this can be observed even on the larger complexes, those raising and fattening 108,000 hogs per year. Such farms were modeled on similar projects, have the same production technology, receive the same mixed fodder from state reserves, yet they differ by work indices.

Out of the 27 complexes for 108,000 hogs that have been in operation for more than 3 years, 16 have reached full productive capacity, 11 have not.

Those complexes that have attained planned productive capacity levels averaged in 1982: 13,000 tons of pork (live weight), 9.3 piglets per litter, a daily weight gain of 627 grams and delivery weight of 125 kg per pig. Average expenditure per centner of weight gain was 4.6 centners of feed units and 2.8 man-hours; the cost was R89. The complexes that have not reached planned productive capacity levels averaged 8.5 tons of pork per farm in 1982 and daily weight gains of 534 grams. They reported excessive labor and input expenditures per unit of output. These farms did not attain the necessary herd replacement rates and only supplied the state with an average of 85,000 tons of pork instead of the planned 110,000 tons.

The following and other complexes are not working as efficiently as they should: Malinovskiy of Krasnoyarsk Kray, Gubinskiy of Belgorod Oblast, Kremenskiy of Voroshilovgrad Oblast, Volynskiy of Karaganda Oblast and Gallya-Kuduk of Tashkent Oblast.

The basis for a highly efficient hog industry is balanced feeding, and this becomes even more crucial on complexes because of their greater concentration of animals.

At the present time only complexes for 108,000 and 54,000 animals have supplies of reconstituted milk, pre-starter and starter feed mixes; these complexes have an average daily weight gain of 576 grams and produce more than 150 kg of pork per pig.

State complexes for 12,000 and 24,000 animals per year as well as various kolkhoze and inter-farm enterprises do not have supplies of reconstituted milk and starter feeds. As a result there is an inadequate growth and development of animals in the first months; average daily weight gains are 250-300 grams. Raising and fattening the pigs takes 320-346 days here. If there were adequate supplies of starter and reconstituted milk on complexes of all sizes, then an additional weight gain of 250-300 thousand tons per year could be attained at the same production level without additional expenditures.

The USSR Glavzhivprom is currently building plants for the production of special mixed fodder, including starters, and reconstituted milk.

Up until the present time, unfortunately, the products of many feed-producing plants do not meet industry standards for raising and fattening pigs in industrial complexes. Manufactured feed often does not meet requirements set by the State Committee for Standards, is contaminated with toxic microflora and has an unbalanced mixture. There are instances of improper mixtures of raw materials and improper supplies of the right feed mixes, all of which means excessive expenditures of feed and reduced animal productivity.

Many complexes must themselves eliminate errors in the feed-production industry, for this is really an unjustified overuse of state supplies. In 1982, for example, the Permskiy Complex of Perm Oblast spent an additional R1 million for feed additives (fish meal, roasted barley, meat-bone meal that they themselves produced, coniferous-grass meal, sugar, etc.), and the Il'yinogorskiy Complex of Gorkiy Oblast spent up to R1.5 million.

For improved animal feeding, many complexes produce enriched meal and other types of feed from crops grown on fields irrigated with manure drainage. This is a significant reserve which can be used to reduce the shortage of proteins and vitamins in animal feeds.

Those farms that use manure and drainage as fertilizer have feed crop yields 1.5-2.0 times greater than other farms, 6,000-10,000 feed units, and annually produce 1,500-2,000 tons and more of vitamin-rich grass meal.

The amount of liquid manure and drainage from livestock enterprises is sufficient to fertilize 1.2 million hectares, although at the present time not more than 210,000 hectares receive this organic nutrient. This is because the republics are slow to resolve the problems of allotting and setting up irrigated fields for hog complexes, although farm complexes must meet the 1985 goal of setting up the necessary irrigated fields for the production of grass meal and mixed fodder.

During the first few years of transforming the livestock sector onto an industrial basis, an expensive process of artificial biological purification has been used for neutralizing manure drainage.

The European Economic Commission of the United Nations, at a symposium in Geneva in September 1981 on pollution of water resources by animal wastes, noted that the biological purification of drainage used for fertilizer or fertilizer irrigation is not to be permitted inasmuch as it leads to a deterioration of the ecological balance. The symposium recommended immediate development and perfection of the technology for using liquid manure and its liquid fraction as fertilizer.

The construction of facilities for artificial biological purification just means large, unproductive outlays of capital investments and electricity. In addition, the destruction of the organic matter in liquid manure and drainage reduces their value as organic fertilizer and leads to irretrievable losses

of nitrogen (almost 70 times) and other nutritious plant elements. This greatly reduces possibilities for increased yields of feed crops on the same farms.

Speaking of reserves available for increased productivity in the hog sector, we must note the critical role of technical equipment and its effect on the sector's economic efficiency. Workers in industrial hogbreeding have well-founded complaints about the quality, durability and reliability of the installed equipment, especially the heating equipment and units for feed distribution. Certain models do not meet technical standards and have poor operational characteristics. Specific measures have been worked out and approved by the USSR Ministry of Agriculture, the State Committee for the Supply of Productive Equipment for Agriculture and the USSR Ministry of Machine Building for Animal Husbandry and Fodder Production [Minzhivmash] to eliminate defects in equipment--progress here is extremely slow. Heating equipment is produced with reduced air capacity, 30-40 percent less than certified amounts; readapting the units has not proved successful. The TV heating units have still not undergone production tests in conjunction with the Pritok-1 control units.

The automated feeding trough is noted for its poor quality. It frequently happens that complexes receive units that are not treated for corrosion (poorly galvanized, badly painted), and this reduces their operational life by a factor of two-three. Industrial mixers are neither reliable nor durable as are chain-driven transport mechanisms with pneumatic gates, the rotating mechanism of the KPS.108.41.01 feed mixer, etc.

Minzhivmash has not fulfilled plans to develop and manufacture the necessary equipment for preparation and distribution of low-moisture feeds on hog raising complexes.

Complexes also have inadequate supplies of veterinary preparations, medicines and disinfection materials. The supply of antibiotics is no more than 35-40 percent of what is needed, sulfonamide compounds only 25-27 percent, disinfectant materials (including chlorine, lime, Formalin and caustic soda) 45-50 percent.

Complexes are experiencing a shortage of disinfection equipment that would meet veterinary service standards. The OM units that are produced have a number of critical defects even for such a basic operation as cleaning facilities. The popular UDP compact disinfection units just aren't produced in adequate numbers--only 100 units last year nationwide. The veterinary service hardly has any syringes, contact and non-contact thermometers, diagnostic instruments for controlling sow fertility and determining the live animal's meat quality. There is not enough laboratory equipment, instruments, the necessary medium for sperm dilution, so important for accurate and continuous work, and centers and stations for artificial insemination of swine. Selection-hybrid hog centers are now being built in various areas of the country. The first one, the Povolzhskiy in Kuybyshev Oblast for 59,300 animals with an output of 18,000 hybrid pedigreed pigs, is already in operation.

Steady work on complexes for 108,000 and 54,000 animals can only be attained when there are pedigree farms; yet the latter are to be found on just 40 percent of enterprises of such size, and of these only half have mastered the production technology. All year round these farms are able to provide a steady supply of pedigreed pigs more adapted to the conditions of industrial technology; they reduce delivery time by a factor of 8-10 for pigs needed to rebuild the herd and lessen the chances of infection, minimizing it.

Those complexes that feed 24,000 and 12,000 hogs per year must build pedigree reproduction sectors or set up regional reproduction farms.

One of the main tasks facing directors and specialists of industrial complexes is to research the structure of the herd for the pedigree farm and determine the number of sows necessary for purebred replacement pigs for the farm and crossbreeds for the agricultural enterprise; to set up evaluation procedures for the productive qualities of live animals in the replacement herd; and to use those male pigs for industrial breeding which have been fed in a controlled environment and which come from high-productive lines.

Increased efficiency in the work of complexes is directly dependent on unswerving observation of industrial technology requirements, on improved productive characteristics of the herd, better farming practices and organization of labor, increased state and plan discipline, efficient and careful use of labor and financial resources, and elimination of current shortages in material and technical supply.

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PROFIT, LOSS ANALYSIS IN KIROV OBLAST KOLKHOZES, SOVKHOZES

Moscow SOVETSKAYA ROSSIYA in Russian 21 Jul 83 p 2, 26 Jul 83 p 2

[Article by A. Petrov, SOVETSKAYA ROSSIYA correspondent, Kirov Oblast: "It is Nice to Repay Loans"]

[Text] According to the Kirov "Oblsel'khozupravleniye [Oblast Agricultural Administration], 7 years ago 36 percent of the oblast's kolkhozes and sovkhoses had operated in the black. Their overall profits were 24 million rubles lower than the losses of the lagging and economically weak farms. The profits did not cover the losses. The aid provided by the state then and in the subsequent years to the non-chernozem countryside was explicitly intended to strengthen the material-technical base of the farms and expedite the construction of housing and social, cultural and communal facilities with the object of enabling the kolkhozes and sovkhoses to augment with each year their output of agricultural products.

In 7 years the Gosbank has granted 600 million rubles in long-term loans and more than 1.5 billion rubles in short-term loans to the kolkhozes alone (there are 310 kolkhozes in the oblast). Substantial funds for capital investment and loans have also been granted to the sovkhoses. It might appear that everything was done to place the farms solidly on their feet and recoup the loans in the form of additional tons of grain, milk, meat....

However, the hopes proved to be misplaced. The output and sales of agricultural products have during all these years been lagging markedly behind the plan targets and the curve of effectiveness of the investment loans has been steadily creeping downward. Thus while during the first year of the 10th Five-Year Plan the gross output of farming and animal husbandry per ruble of all kinds of loans was 1.71 rubles in the kolkhozes and 1.40 rubles in the sovkhoses, during the first years of the 11th Five-Year Plan this indicator has declined in half. Only 24 percent of the farms operated in the black.

The reasons were quite a few. For one thing, in 3 out of these 7 years the weather was unfavorable. For another, the wage system is imperfect. But the principal reason was that the role of the economic service was obviously minimized. Few kolkhozes and sovkhoses conducted a thorough profit-and-loss analysis, compared the results with the available resources and took into account the possibilities for further expanding production.

The economists somehow remained unworried by the fact that the targets for the lagging branches stay the same in the long-range plans either and that wages were calculated in terms of output per hectare rather than in terms of the end-result.

As a consequence, at some unprofitably operating farms guaranteed wages did not become a stimulus for increasing labor productivity and instead they offered a guarantee for high wages regardless of the quantity and quality of the end-output.

G. N. Tatarinov, the chief of the finance office at the Oblsel'khozupravleniye, said: "Of course, local farm and rayon-administration experts should attend to eliminating instances of this kind. Yes, we clearly underestimate the role of the accounting services and farm managers strive to fulfill the plan at any price, paying little heed to the production cost of the kolkhoz or sovkhoz. This, naturally, has not contributed to increasing the yield per loan ruble."

According to Gennadiy Nikolayevich, a no less important destabilizing factor is the gigantomania enveloping the construction of hog and milch-cow complexes. The new large hog raising enterprises produce pork at a loss, while the productivity of cattle on dairy farms has declined, since there are no cultivated pastures or meadows near the cow pens and no nearby fodder crop growing. Everything has to be brought in from a distance. The expenditures are rising but milk output is not.

Who is at fault for these deficiencies? This question simply amazed A. K. Metelev, secretary of the Yur'yanskiy Rayon party committee, and V. N. Serov, chief of the rayon agricultural administration (and of the RAPO [Rayon Agro-Industrial Complex] as well). After all, somebody had made the decision to build in that rayon an inter-farm complex for fattening 2,000 head of young cattle.

The comrades spread their arms. One had not yet worked in the rayon when that decision was made, and hence he is not responsible. The other does not remember, but he believes that once a decision is approved and transmitted from "the top," it is not necessary to explain, but to build, the more so considering that the state was paying for the construction of that inter-farm complex.

Last December the complex was "opened" for use in great haste and in unfinished form. But it was released not to the customer who had ordered it, namely, in effect, the rayon agricultural administration, but... to the kolkhoz "Zavety Lenina." According to V. P. Rassokhin, party organization secretary at that kolkhoz, this came as such a surprise that the board chairman I. G. Slavutin was categorically opposed to its acceptance.

He said: "Otherwise I'll have no choice but to resign. That thing will only cause us losses."

He did not resign, because he was not allowed to do so. But the complex all the same was transferred to the kolkhoz's jurisdiction--without approval by its members, let us add. This farm, already operating at a loss, was burdened with an additional 1.5 million rubles in loans, a largely unfinished facility and the problem of providing fodder for the herd.

The rayon agricultural administration gave assurances: "Never mind, we will shortly dispatch land reclamation personnel to the kolkhoz. They will reclaim 300 hectares of meadows and pastures. The fodder will be there."

Fine, but when? But the livestock has to be fed even now. Incidentally, how in the meantime can loans be repaid and a definite percent of depreciation be calculated? Clearly the yield per loan ruble will not soon become tangible. The kolkhoz and the state are the losers, while the individual who had made this hasty decision has remained untouched: it has not been possible to identify him.

At present anxiety about the low effectiveness of production loans is displayed at various levels. It is expressed by the heads of the rayon office of the oblast finance agencies and the RSFSR office of the Gosbank. Thus, V. I. Kondrashov, chief of that office's economic-planning division, confirmed that the effectiveness of bank loans has declined not only in Kirov Oblast.

He declared: "Kirov Oblast is just about average in this respect. Genuine praise is deserved only by Leningrad Oblast, where the accounting services perform well and indicators are higher. As for the other regions of the Non-Chernozem Zone, cost accounting has not so far been properly introduced there and proper ways of calculating and economizing have yet to be learned there. So far as the bank is concerned, it has fulfilled its 'obligations' by granting all the allotted loan funds."

All this is correct. The bank grants loans immediately, especially short-term loans, if a kolkhoz or sovkhov requests them for the purpose of paying wages. The applicable rule here is astonishing: a loan officer may be aware that a farm has overspent its funds and may object to this, but he has no right to refuse a loan application. Everybody gangs up against the loan officer: the rayon agricultural administration, the party committee and the concerned ministry: a delay in paying wages is viewed as an extraordinary occurrence, so that the loan officer has no choice but to append his signature to the loan application, which will not be repaid when due.

The chief of the planning-economic administration division glossed over only one fact: the bank is not a mere cashier's office--it not only grants loans but also is supposed to monitor their utilization. Its obligations include monitoring the manner in which the loan funds are spent by the debtors, assisting the farms to streamline their accounting procedures and promoting greater effectiveness of all outlays. Under the instructions in force, the bank can and should strictly and principledly bring influence to bear on the heads of those kolkhozes and sovkhovs who spend loan funds irresponsibly and without keeping records and illegally raise the wages of workers in basic production and especially of the fired construction brigades whose members sometimes are paid double or even thrice the standard wage rates--and not one of the chiefs questions this.

Such a situation cannot be tolerated any longer. The bank, the economic service of the agro-industrial complex and the agricultural commissions of the local soviets are duty-bound to bring order into the bookkeeping of expenditures and tighten financial and work discipline.

It is time for the farms to introduce strict economies, eliminate unproductive expenditures and tighten the monitoring of the spending of financial and material resources. It is not normal when those who perform poorly and produce less get paid more than conscientious and most productive workers. And yet, this abnormal situation still persists and hardly perturbs anyone. More anent this in the next report.

[26 Jul 83 p 2]

Fewer than 30 kilometers separate the "Korminskiy" Sovkhoz from the "Progress" Kolkhoz. Arkadiy Nikolayevich Charushin has been the sovkhoz's director for 13 years. Vitaliy Mikhaylovich Tashirev has been reelected the chairman of the kolkhoz board for the 7th year in a row. One is a zootechnician by education and the other an agronomist. The soils and workload per person on both farms are about the same, but their economic indicators differ sharply.

The "Progress" Kolkhoz, which had operated in the black during the 9th Five-Year Plan, has retrogressed in the last 7 years and operated in the red for the last 6 years. During the first 2 years of the 11th Five-Year Plan its losses totaled 809,000 rubles.

The sovkhoz, by contrast, has strengthened its economy and operated in the black in 6 of the last 7 years. It still is not operating as profitably as it might desire: its total income during the last 7 years was 633,000 rubles. But its regular annual increase in income even so enables this farm to resolve social questions and strengthen its personnel.

What is promoting the successes of one farm and holds the other back?

While it has less land, fewer livestock and a smaller workforce, the "Progress" Kolkhoz in 1976 had the same energy availability per worker as the "Korminskiy" Sovkhoz and the value of its fixed assets was 450,000 rubles higher. Yet its crop and livestock productivity was lower than that of its neighbor. It could have properly utilized flax, a profitable local crop, could have been a great help. It should have utilized most effectively the 950,000 rubles in long- and short-term loans granted to it by the state in that year.

This did not take place, however. The yield of grain crops was 8.2 quintals per hectare, and the milk yield per cow proved to be 1,040 kg lower than at its neighbor.

In the last 7 years the kolkhoz had borrowed from the state more than 7.5 million rubles but its gross output totaled only 4,345,000 rubles. An even smaller part of that output was sold. Notwithstanding this, the wages of kolkhoz members have been steadily rising instead of diminishing. On this lagging farm the pay per man-day proved to be much higher than on its profitable neighbor farm--and than the rayon-wide average. In the last 2 years of the current five-year plan, gross income at this kolkhoz was only one-third of the total wages paid to kolkhoz members. No funds were available for accumulation, and there were no profits.

A year passed since my first meeting with V. M. Tashirev. For the first time in recent decades grain harvests in Kirov Oblast averaged 14.6 quintals per hectare and the oblast's gross grain harvest reached more than 2 million tons. The indicators of animal husbandry and rural construction have improved somewhat, and the yield per loan ruble increased on some farms.

Changes also have taken place at the "Progress" Kolkhoz. It has built with its own resources seven housing units. The rayon MPMK [expansion unknown] built a grain-drying facility, three single-family houses and the first stage of a dairy complex. New high-power tractors and other equipment were received. In 1982 the state granted 1,770,000 rubles in long- and short-term loans to this kolkhoz and wrote off half a million rubles in earlier debts.

But this generous assistance, too, did not improve the situation. What is more, the kolkhoz's output of grain, milk and meat was even lower than it had been during the first year of Tashirev's stewardship. All types of production other than flax proved to be unprofitable.

In principle, the flax field could yield more. But, through the efforts of the farm's heads, 3 years ago the size of that field was halved, and last year a part of the harvest could not be collected owing to poor organization. The losses were tenfold as high as the increase in flax harvest, and the "loan ruble" clearly produced nothing in return there.

The inertia of work and thought, uncreative attitude toward the tasks and, lastly, the failure of the manager to be demanding toward himself in his actions and behavior have largely contributed to relaxing discipline among the farm personnel and prompting it to be negligent toward its duties. Not only board members forgot to calculate expenditures. Few are worried that the kolkhoz is not repaying its loans.

Were this kolkhoz only an isolated instance, it would perhaps not deserve such a detailed discussion. But in recent years this writer happened to visit many Vyatka farms and observed that most of the lagging kolkhozes and sovkhoses have the same problems. Whether we consider the "Progress" Kolkhoz in Arbazhskiy Rayon or the "Korobovskiy" and "Solovetskiy" sovkhoses in Khal-turinskiy Rayon, and whether we consider the Kolkhoz imeni Komintern, representative of the oblast's southern zone, or such farms farther to the north in Yur'yanskiy Rayon as "Pamyat' Il'icha" or "Lozhkarskiy," the most often voiced complaints are the same: shortage of manpower, shortage of housing, lack of roads and the insulting lack of attention from land reclamation agencies.

V. I. Babintsev, chairman of the "Pamyat' Il'icha" Kolkhoz, said: "Here only about 100 able-bodied persons have remained, compared with 150 in the recent past. Owing to lack of manpower, supervisory personnel have to personally prepare fodder, help repair equipment and plant and harvest grain. To keep youth on the farm, two apartment buildings with proper amenities have to be built. We cannot build them with our own resources alone."

The "Pamyat' Il'icha" Kolkhoz at present owes the bank 3.5 million rubles. In recent years some 60 dwellings were built with bank funds rather than with profits from operations. Why then is the number of kolkhoz members declining instead of growing?

To live fully, man needs not only housing and high wages. The moral climate in the collective and tangible results of labor are important factors. But on that farm work discipline is low and drunkenness and profligacy flourish. The culprits are not properly made accountable. As a result, conscientious workers cannot endure this atmosphere and transfer to other farms. So now, 30 percent of the equipment at that kolkhoz lies idle, fields are poorly farmed and there is much manual labor involved. "Record" low harvests are a direct consequence of all these factors.

Profitable farms do not operate thus. At the aforementioned "Korminskiy" Sovkhoz the organization of labor and the attitudes of personnel differ markedly from what you observe at the lagging kolkhozes. A well-considered shop structure of management has been introduced there, with each expert being entirely responsible for his sector of operations. One explores ways of raising the productivity of the animal-husbandry shop; another, agricultural methods; and still another, fodder production.

Most of these experts are native young people. They graduated from institutes and technikums to which they had been sent by the sovkhoz. But what matters most is that everyone, beginning with the director and the party committee secretary, has long since grasped the idea that under their conditions animal husbandry is a profitable branch, and they attach primary importance to problems of increasing the milk yield of cows and the weight gain of the cattle being fattened.

Last year milk yield per cow averaged 3,118 kg, or 1,194 kg more than at the neighboring "Progress." Animal husbandry output per 100 hectares of cropland is higher, and production cost is much lower. Moreover, the sovkhoz delivers to the state twice as much output, and of better quality at that.

But perhaps we are comparing something that cannot be compared? No, both farms are nearly of the same kind as regards their resources and workload per worker, and what is more, even now the value of fixed assets at "Progress" is higher than at "Korminskiy." The difference lies in something else: in pursuing specialization in milk and meat production, the sovkhoz management did much--if not all it could--to modernize animal husbandry operations and secure them with a more varied range of fodder. The livestock was of concern not only to the animal husbandrymen but also to those working in the fields, and their wages were made directly dependent on the end-result.

Even though no one gave this sovkhoz anything in excess of the allotted resources and reclamation agencies still have not done anything about its land, the wise heads of this sovkhoz knew how to utilize its own resources--through improved cultivation and the application of fertilizers--to increase grain and fodder crop yields, raise purebred cattle and bring livestock operations into order. They feel no sympathy for slovenly workers and loafers. And so they achieved a turnabout. Now at that kolkhoz cows are regularly fed and milked, fodder is supplied promptly, and instructions of experts are followed. And if someone breaks a rule, he is not forgiven. He has to justify himself to his comrades and is deprived of many privileges and allowances.

These rigorous requirements have not repelled the employees. On the contrary, there is no personnel turnover at that sovkhos, and those who had left it for other farms are now returning to it.

A major contribution to the success of the collective was made by communists, and primarily by the sovkhos director. Like true masters of their farm, they display concern for improving the living and working conditions of employees, and they have selected the right experts, introduced cost-accounting operation and are analyzing and counting every kopeck and teaching others how to do it.

But the sovkhos is a state farm, whereas the kolkhoz is a cooperative farm. Perhaps this is the reason? No, experience does not warrant this assumption.

The "Put' Lenina" Kolkhoz in the oblast's Kotelnichskiy Rayon is famed throughout the country for its accomplishments. In the mid-1950s it had in no way differed from its relatively poor neighbors. But then its direction was taken over by A. D. Chervyakov, a talented and practical production organizer who, using the same personnel, raised the kolkhoz to a higher level.

It can be said without exaggeration that this is a model farm. Each year it copes with its targets and derives a net income of 1.5 million rubles. "Put' Lenina" is the only kolkhoz in the oblast where, under the shop structure of management, all the subdivisions have been operating under cost accounting principles for the last 10 years.

On comparing the performance of the leading and lagging collectives, once again it can be concluded that the differences between them chiefly reduce to differences in the level of responsibility, organizational work, executive discipline and the competence of managers and experts at kolkhozes and sovkhos as well as to the differences in the ability of local party organizations to encourage work collectives to attain the specified targets.

1386

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PROBLEMS OF EQUIPMENT SUPPLY FOR PRIVATE PLOTS EXAMINED

Moscow SEL'SKAYA NOV' in Russian No 10, Oct 83 pp 18-19

[Interview with Yu. I. Lobov, "Glavkoopkhochtorg" chief, by I. Abramov:
"'Tools' for Private Plots"]

[Text] Private plots of rural inhabitants are burgeoning. The state has placed at the disposal of citizens 7.8 million hectares of land, including 5.8 million hectares of plowland. At the beginning of this year the cattle population on private land plots had already exceeded 24 million head, including 13.4 million cows, along with about 16 million hogs, 31.8 million sheep and goats and more than 388 million head of poultry.

Our correspondent interviewed Yu. I. Lobov, member of the board of the Tsentrosoyuz [Central Union of Consumers' Cooperatives], chief of the "Glavkoopkhochtorg" [Main Administration for Trade in Metalware and Household Goods]. Yu. I. Lobov commenced by saying:

[Answer] The possibilities of private plots for augmenting food resources are great. This is convincingly demonstrated by statistics. Suffice it to mention that last year farm output on peasant plots totaled 32.5 billion rubles.

It is in our common interest to do everything to increase the yields of private plots, so that every inch of plowland, meadow, pastureland or so-called poor land would be made more fruitful with the competent and caring hands of the truck gardener and the "mini" livestock farms would produce more meat, milk and eggs.

But to this end the private plot owner needs help. In what? That is not easy to describe all at once. Much on this subject has already been written in 'SEL'SKAYA NOV', insofar as I know. Even so, I should like to dwell on one problem.

It is necessary to provide the private plot cultivator with more tools--with machinery and convenient implements facilitating the care of the truck garden, orchard or livestock. Consider kolkhoz and sovkhos lands: how much new

equipment has appeared on them! But once the rural toiler's day of public work is over and he returns home to his private plot, he has to tend it in the same old-fashioned manner, just like 20 or 30 years ago.

Picturesquely speaking, experienced operators of heavy-duty "Kirov" tractors have to hoe the soil with mattocks on their private plots.

[Question] Yuriy Ivanovich, the problem is clear. You know the broad picture, as the saying goes. As known, consumer cooperatives have been charged with the duty of providing private plot owners, members of orchardry and gardening societies, with farm implements, means of small-scale mechanization and pesticides and fertilizers....

[Answer] And we do try to implement this task. First of all, let me point out that 133,000 cooperative enterprises are trading in these goods in the countryside. The broadest variety of these goods is concentrated in the premises of rayon trade centers and "Khozyaystvennyye tovary" stores. Sales of groups of goods adapted to specialized needs are being introduced: "For Care of Livestock and Poultry," "For Orchardrymen and Truck Gardeners," "Everything for Tilling the Soil." These groups include such subgroups as "Orchardry and Truck Gardening Implements," "Mineral Fertilizers," "Crop Protectants." Lists of equipment items have been prepared. In introducing them we proceed from specific local conditions.

In recent years the network of specialized stores designed to sell goods to private plot owners and members of orchardry and truck gardening societies has grown markedly. For example, specialized "Orchardry," "Household" and "Home-Orchard-Garden" stores have been organized on the basis of the existing "Khozyaystvennyye tovary" stores within the Krasnodar, Stavropol', Brest, Novgorod, Voronezh, Ryazan', Volgograd and Penza consumers' societies. Currently about 80 trade enterprises of this type operate in the countryside of the RSFSR, while 400 stores trading in agricultural goods have organized the reception of orders for implements and mineral fertilizers. Of course, this is little but, as the saying goes, the beginning is always hard.

The experience of the Smolensk cooperatives is noteworthy. Recently a NOT [Scientific Organization of Labor] laboratory has, jointly with the division for organization and equipment under the Smolensk Oblast Union of Consumers' Cooperatives, reviewed the equipment lists according to which the wholesale bases are to maintain inventories of 66 types of orchardry and gardening implements, 7 kinds of mineral fertilizers and 10 kinds of crop protectants; in the warehouses of the rayon consumers' societies the corresponding indicators are 62, 7 and 10, respectively; and in the stores trading in farm goods, 45-60, 4-7 and 10, respectively. Orchardry and truck gardening implements--15 kinds--are sold in "store-mobiles." Altogether, within the system of the oblast union of consumers' societies, 1,200 "Tovary podsednevnogo sprosa" [Staple Consumer Goods] stores, 86 "store-mobiles," 120 farm goods stores and 6 "Home-Orchard-Garden" stores take part in selling these goods on grouping them according to category of operations: "Everything for Tilling the Soil," "Everything for Cultivating the Orchard," "Mineral Fertilizers," "Crop Protectants." Eighteen stores were especially designated for serving the orchardry societies.

Active forms of trade are widely employed in the oblast. Exhibitions of goods for sale and farmers' markets are held at the central farmsteads of kolkhozes

and sovkhoses. Contests for the best store selling goods for orchardry and truck gardening are being organized.

[Question] Exhibitions of goods for sale and farmers' markets are, of course, a useful thing. But, Yuriy Ivanovich, don't you agree that far from all of the merchandise demonstrated at the exhibitions can be freely purchased in stores? This is, incidentally, also evidenced by letters from our readers. What are the consumers' cooperatives doing to meet more fully the demand of buyers?

We structure our work with industrial enterprises to take into account the shortcomings of past seasons. Dozens of new enterprises have been recruited for manufacturing goods needed for private plot farming. At present rural trade is being supplied with orchardry and truck gardening implements, mineral fertilizers and crop protectants by nearly 450 enterprises of 70 ministries.

The cooperatives in the Baltic republics, Belorussia and Moldavia are actively collaborating with industry to expand the output of orchardry and truck gardening implements as well as of means of small-scale mechanization. On the initiative of these unions of consumers' cooperatives, an interdepartmental coordinating council has been set up to coordinate the efforts of various ministries and departments in producing goods for private plot owners and members of orchardry and truck gardening societies. The council reviews output plans and recommends the best models of implements and equipment for series production. Lastly, the council monitors the updating of the variety of output. Let me note that the rural inhabitants of these republics hardly ever send complaints about shortages of goods for private land plot farming. We hope that other regions, too, will follow this example.

In general, it can be stated that the broadening of contacts with suppliers is already bearing fruit. This year industry will provide 106,000 orchard ladders--33,000 more than last year, and 65,000 more orchard handtrucks and barrows than last year. The output of prefabricated hothouses and garden pruners has increased markedly. The demand for rakes, shovels, hoes, mattocks, forks, weeders, pruning knives, pruning saws, spading forks and scoops, sets of soil-tilling and viticultural implements, hand-operated pumps, garden hose and grape presses is being met.

If in places the supply of these goods in stores is not consistent, this is most often due not to objective causes but to poor management by trade personnel, its lack of skill in studying and analyzing buyer demand.

Let me add that the consumer societies should not simply bring in goods from distant places but seek local producers. This is being done in Kurgan Oblast, for example. Experts from the union of consumers' cooperatives in that oblast analyzed the possibilities of all industrial enterprises in the oblast and, with the aid of local party and Soviet organs, placed orders for not only simple but also intricate implements with some of these enterprises. This is also being done in Omsk Oblast, Krasnodar and Stavropol krais and the Ukraine.

[Question] Even so, the rural dweller or the town dweller who maintains a private plot often leaves a store disappointed because what he wants is either unavailable or....

[Answer] Unfortunately, this does happen. Some goods needed by private land plot owners remain in short supply, especially sprayers, garden pruners and watering-cans. We are trying to recruit new enterprises for the manufacture of these items.

[Question] Yuriy Ivanovich, it would be interesting to know industry's attitude toward the needs of private plot farming.

[Answer] Let me cite just one instance. The enterprises of the USSR Ministry of Tractor and Agricultural Machine Building--the leading producer of orchardry and truck gardening implements and tools--last year produced 26.6 million rubles of these goods, while this year they intend to increase their output to nearly 40 million rubles. Their output is exceeding the target figures.

The ministry has set up a main design bureau specializing in the development of implements and tools for private plots. Last year engineers at that bureau proposed several new designs for series production, including four models of single- and multiple-row seeders for vegetables and flowers. Their design is simple and requires no special training. The new hydraulic tree trimmer, which requires much less physical effort than its mechanical predecessor, will ease orchardry labor.

[Question] The editors continue to receive from readers many complaints about the unavailability of means of small-scale mechanization in rural stores. Many rural dwellers, especially mechanizers, are trying to solve the problem on their own by devising all kinds of self-propelled chassis, small tractors, etc. When will, finally, the private plot owners be relieved of the need to "invent the bicycle"?

[Answer] This is not a new question but it indeed remains acute. A survey of private plots in various regions of the country has revealed that private livestock owners have a special need for "mechanical helpers." The daily expenditure of time on the upkeep of one cow averages 1.3 hours. About 80 percent of the rural families that do not keep livestock are not acquiring it precisely for this reason.

Let me try to outline the situation as regards the production of mini-mechanisms. The production of small-sized tractors is being organized in Kutaisi. By 1985, their output should reach 15,000. Current plans provide for an output of 2,000. But these plans (for the umpteenth time!) will hardly be fulfilled: the construction of the factory building is being delayed and the tractor model has not as yet been approved.

The MTZ-05 small tractor has proved its worth. It is reliable and simple to operate. The Minsk Tractor Plant is exploring the possibilities for expanding its production.

Unfortunately, the enterprises of the USSR Ministry of Machine Building for Animal Husbandry and Fodder Production are not fulfilling our orders for compact mowers. Of the 75,000 mowers of this kind planned for the 5-year period, we received only about 4,000 during the first 2 years. Moreover, the

series-produced model is meeting with complaints from buyers: its design is awkward and the machine is heavy, weighing about 80 kg.

On our initiative, enterprises of the USSR Ministry of the Aviation Industry have devised a prototype model of a compact mower weighing only 20 kg. The question of its series production is being currently decided upon.

Many means of small-scale mechanization, even the best-designed ones, are being manufactured in extremely limited quantities. For example, the Ivanovskoye Production Association for the Manufacture of Spare parts under the USSR Ministry of Machine Building for Light and Food Industry and Household Appliances proposed a trial series of the so-called rural machine whose designers "taught" it many operations: straw and tuber cutting, sawing and jointing lumber, shelling corn cobs, grinding grain, sharpening implements. The machine is provided with a set of varied accessories. It is compact, occupies little room, and safe to operate. Switching from one mode to another and adjustment take only a few minutes.

I believe that many would like to acquire such a "mechanical helper," but....We will have to wait until its mass production is organized.

It seems to me that so long as nearly every new machine or accessory at once becomes hard to get, it would make sense to lease them rather than sell them to individuals. Of course, priority in receiving means of small-scale mechanization should primarily be given to those who overfulfill their deliveries to the procurement stations.

[Question] But suppose a store is supplied with a sufficient quantity of some or other merchandise. What would then be expected of the consumer cooperatives?

[Answer] They would be expected to teach the population, our potential buyers, how to use properly the available merchandise. Don't be surprised, but a thorough study of buyer demand has revealed to us that many private plot

owners refrain from purchasing new tools and implements because they are unfamiliar with their operating qualities.

Let me cite a specific instance. Cooperatives in Kurgan Oblast tried to determine the demand of the rural population for mineral fertilizers. It turned out that most private plot owners and members of orchardry and truck gardening societies were using these fertilizers improperly. As a result, the fertilizers did not enhance crop yields markedly and people underestimated their potential.

We conducted a broad publicity campaign in the form of a monthly day of sales of farm implements, crop protectants and mineral fertilizers. Now the demand for the fertilizers is rising rapidly.

[Question] Sheds and other structures are indispensable on private plots. Yuriy Ivanovich, what is being done about sales of the building materials needed for this purpose?

[Answer] Within the system of consumer cooperatives, lumber and building materials are being sold by more than 1,500 stores-warehouses and approximately 24,000 farm goods stores, most of them opened in the last 5 years.

During the first 2 years of the 11th 5-year Plan sales of cement increased by 40.6 percent; roofing slate, by 27.7 percent; window glass, by 11 percent; lumber, by 4.8 percent; bricks, lime, chalk, alabaster and other local building materials, by 11.4 percent; and miscellaneous building materials, by 6.7 percent.

But the funds allocated by consumer cooperatives on lumber and other building materials do not suffice to meet the demand of rural dwellers. In particular, the market supply of wooden houses and of their prefabricated components has recently been contracting instead of expanding. Wooden houses are being built and shipped without being provided with annexes for the upkeep of livestock and poultry and storage of vegetables and potatoes.

Violating the existing regulations, the USSR Gosnab provides for supplying cement in bulk form for the market. Owing to the absence of the necessary means of mechanization of the loading and unloading of glass shipped in large containers and crates, problems arise in providing it to the retail trade network.

These matters might seem to be trivial. But because of them there is appearing an artificial shortage of certain goods, along with concomitant problems for buyers.

I am convinced that nothing can be trivial in such an important matter as helping private plot farming.

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ADMINISTRATIVE PROBLEMS OF MEAT PRODUCTION ENTERPRISES WITHIN RAPO SYSTEM

Moscow MYASNAYA INDUSTRIYA SSSR in Russian No 10, Oct 83 pp 12-15

[Article by Doctor of Economic Sciences S. S. Shnitser and Candidate of Economic Sciences V. B. Dardik, All-Union Scientific Research Institute of the Meat Industry]

[Text] In accordance with the Standard Statute on the Rayon Industrial Association of Enterprises the organizations and enterprises of the agroindustrial complex form part of rayon agroindustrial associations (RAPO). At the same time, those that service several rayons can form part of RAPO in agreement with superior bodies.

Basically, meat industry enterprises receive livestock and poultry from several adjacent rayons. In this connection the question arises as to whether it is advisable to include these enterprises in the RAPO structure and to what position on this matter the sector's enterprises and associations should adhere. Some workers assume that, since production associations form part of oblast (kray and ASSR) agroindustrial associations, there is no need for enterprises receiving raw materials from several rayons to form part of RAPO. One cannot agree with this. We assume that all the sector's enterprises, irrespective of the number of rayons serviced by them, as a rule, should form part of RAPO. This will enable them to establish closer relations with the farms of their rayon, the Rayon Agricultural Equipment Association and other organizations and with the rights of a RAPO member to more efficiently solve problems connected with production and economic activity and to improve mutual relations with the RAPO of adjacent rayons supplying raw materials to enterprises and with oblast (kray) APO [agroindustrial associations].

In a number of Union republics there are no oblast production associations of the meat industry. In these cases all the oblast's enterprises must form part of the oblast (kray) APO and, at the same time, of RAPO. In order to improve the organization of management of the agroindustrial complex, it is necessary to examine the problem of the establishment in these oblasts on the basis of the head meat combine of meat industry associations, which would form part of the oblast (kray) APO and represent all the oblast's enterprises in it. For example, in the Belorussian SSR all the sector's enterprises are directly subordinate to the republic's Ministry of the Meat and Dairy Industry and, at the same time, form part of the oblast APO and RAPO. The creation of oblast production associations would make it possible to establish closer relations between the meat industry and other links of the agroindustrial complex.

It is also necessary to solve the problem of including production units deprived of juridical independence in the RAPO structure. In accordance with the long-term plan for the management of the meat industry the majority of the sector's enterprises have been transferred to the status of production units. Undoubtedly, this measure aimed at the consolidation of economic bodies is progressive and its scale should increase. All production units should form part of RAPO. In this connection it is advisable to extend the rights of production units, in particular to grant them the right to conclude forward contracts for the delivery of livestock and poultry with farms attached to them, to have current subaccounts in the bank and to form economic incentive funds according to the established standards.

Direct relations between meat industry enterprises and agriculture have expanded significantly in the last few years, to which the transfer of the functions of state purchases of livestock in 40 RSFSR oblasts and 9 Union republics to the USSR Ministry of the Meat and Dairy Industry has contributed. Livestock procurements in these regions are now carried out without the participation of intermediate organizations. At the same time, in a number of oblasts in the RSFSR and in the Union republics, as before, procurements are carried out by the organizations of the USSR Ministry of Agriculture and the USSR Ministry of Procurement. In order to improve the procurement system and to strengthen direct relations, it is advisable to transfer the functions of livestock purchases in all oblasts, krays and republics to the meat industry.

The USSR Food Program has confirmed the need for the organization of the acceptance of livestock directly on farms and for its delivery by the transport facilities of procurement organizations.

The system of settlement of accounts for the accepted livestock according to the quantity and quality of meat obtained after the slaughtering of livestock has become widespread during the last decade. At present this system is applied at 96 percent of all the enterprises and 88 percent of the livestock received from state purchases is delivered according to this system. Experience has shown that, at the same time, the interest of farms in receiving a large quantity of the end product--meat--increases, its weight and quality are determined more accurately and the attempt by deliverers to overfeed livestock for the purpose of overstating its weight disappears.

At the same time, some agricultural workers propose a return to the former procedure of acceptance of livestock according to the live weight. Ignoring the serious shortcomings in this system, they believe that livestock should be weighed and its grade should be determined directly on farms. Such proposals cannot be considered substantiated. Livestock is delivered to meat industry enterprises by motor transport (94 percent of the total transport operations) over an average distance of 70 to 75 km. Over such a distance livestock loses live weight only owing to the decrease in the content of the gastrointestinal tract and meat and fat losses do not occur.

The advocates of the weighing of animals and determination of their grades on farms point out that this, allegedly, follows from the requirement to accept livestock in the places of its production. However, such a point of view does

not correspond to reality. The instruction on the procedure of acceptance of agricultural products from interfarm enterprises on the basis of direct relations and indirectly in places of production approved by the USSR Ministry of Procurement and the USSR Ministry of Agriculture stipulates the following: The driver (acceptance official) accepts livestock according to the number of head on farms, checks the correctness of tagging and filling of accompanying documents and delivers livestock to the meat combine. The workers of the meat combine with the participation of the representative of agriculture place livestock in enclosures, avoiding its pooling, slaughter livestock and process carcasses and on the basis of the data on the weighing of carcasses and the evaluation of their quality pay for the accepted livestock at the purchase prices set per ton of meat.

Thus, this system efficiently combines the requirements for the acceptance of livestock on farms (acceptance according to the number of head) and an objective qualitative evaluation of the raw materials received after the slaughtering of livestock. The application of this system of transfer and acceptance of livestock is permitted to all kolkhozes, sovkhoses and other agricultural organizations.

It should also be kept in mind that under the conditions of motor transport specialization, essentially, it is impossible for the driver to bear responsibility for the change in the weight of animals during transportation. Furthermore, the weighing and determination of the degree of fatness of animals on farms would require specialists--commodity experts and veterinarians. On many kolkhozes and sovkhoses weighing facilities do not meet modern requirements and there are no scales. Thus, the transition to the weighing of livestock directly on farms would require considerable expenditures.

In accordance with the government decision the delivery of livestock to meat combines should be carried out by procurement organizations in a centralized manner. This, however, does not mean that transport facilities should belong to meat industry enterprises (associations). The specialization of transport operations is most efficient. At the same time, motor vehicles are utilized more efficiently, the organization of transport operations is improved and transportation costs are lowered. For the purpose of a fuller utilization and an efficient operation of transport facilities it is advisable to entrust the delivery of livestock to meat combines to the USSR State Committee for Supply of Production Equipment for Agriculture or to special motor pools of other organizations. In individual cases transportation can be carried out by meat industry organizations, as well as by animal husbandry complexes.

In every rayon (oblast, kray and republic) it is necessary to determine what organization should centrally deliver livestock and prepare the material and technical base for the performance of these operations with a view to fully changing over to a centralized delivery of livestock during the next few years. On the basis of the data on the volume of raw material resources and the prospects for their growth in the raw material zones of meat combines it is necessary to determine the need for motor vehicles and to develop measures for improvement in the transportation of livestock (installation of loading sites, construction of motor roads and so forth).

Mutual relations between meat industry enterprises and farms are determined by forward contracts for the delivery of raw materials. Under the conditions of agroindustrial integration the content of these contracts should be intensified and expanded. They should reflect not only problems connected with the purchase and sale of livestock through state procurements, but also stipulate the obligations for the slaughtering and processing of livestock not subject to delivery on the account of state purchases, provision of mutual production services for the transportation of raw materials and finished products, production of meat products in the form of exchange operations, meat storage at the refrigerator of the meat combine, temporary assistance by workers and so forth. Forward contracts should be concluded for a 5-year period with an annual refinement.

Often forward contracts are of a formal nature. Suppliers are not materially responsible for their nonfulfillment and do not observe the schedules of delivery of raw materials. It is necessary to increase the efficiency of forward contracts.

In oblasts (krays and republics), where the Skotoprom [Livestock Breeding Industry Administration] system still operates, contracts for the delivery of livestock and poultry are concluded between their offices and meat industry associations. With the transfer in most of the country's rayons of the functions of procurements to the meat industry, along with the conclusion of forward contracts between farms and procurement organizations, it is advisable to introduce the practice of conclusion of agreements between the sector's associations and oblast (krai and republic) administrations of agriculture for the delivery of raw materials throughout the oblast. These administrations should participate in the development of schedules of delivery of raw materials and control the fulfillment of plans and schedules by sovkhozes and kolkhozes. Forward contracts between meat combines and farms should be concluded with the participation of rayon administrations of agriculture, that is, be threesided. To obtain raw materials from adjacent oblasts, contracts for the delivery of livestock should be concluded between recipient associations and procurement organizations.

For the purpose of increasing the material interest of kolkhozes and sovkhozes in the fulfillment of obligations, it is necessary to immediately realize the decision adopted by the food program on the establishment at processing enterprises of agroindustrial associations of the material incentive fund for workers of kolkhozes, sovkhozes and other agricultural enterprises and organizations for an increase in the volumes of delivery of products by them and for an improvement in their quality. It is advisable to establish these funds at enterprises by deducting a certain part of the profit. The amounts of paid bonuses should be differentiated and take into consideration not only the degree of fulfillment of obligations for the delivery of livestock, but the observance of delivery schedules as well.

Bringing the material and technical base in correspondence with raw material resources with due regard for the prospects for their growth and ensuring the continuous slaughtering and processing of livestock and the production of meat products are the urgent tasks of production associations and enterprises.

When determining the raw material resources of enterprises and their capacities, it is necessary to take into consideration not only the volumes of state purchases of livestock, but also the need for the processing of livestock belonging to consumer cooperatives, to subsidiary farms of state institutions and enterprises and to the population.

The network of meat industry enterprises (about 1,000 enterprises) formed over many decades does not fully meet modern requirements. At the beginning of 1982 small enterprises producing 20 tons of meat per shift comprised 71.6 percent and those producing up to 5 tons of sausage products, 64.8 percent of the total number of enterprises. Their share in the total capacity of enterprises comprised 32.1 and 21.5 percent respectively. Large enterprises comprise the following: in meat production, 5.6 percent (in capacity, 27.1 percent) and in sausage products production, 6.5 percent (in capacity, 37.8 percent). Many small enterprises, which are poorly equipped technically, are located in the raw material zone of large enterprises. For example, in Vinnitsa Oblast small enterprises--in Gaysin (of a capacity of 15 tons per shift), in Tul'chin (8 tons), in Kazatin (16 tons) and in Bar (15 tons)--are located in the raw material zones of the Vinnitsa and Trostyanets meat combines. In Dnepropetrovsk Oblast meat combines in Zheltyye Vody (13 tons per shift) and Pavlograd (19 tons per shift) are located in the raw material zones of larger enterprises and so forth. Obviously, owing to the predominance of small enterprises, the possibilities of technical progress in the sector are limited, which hampers the growth of labor productivity and of other economic indicators. In a number of the country's rayons meat combines are greatly removed from raw material bases. This necessitates a distant transportation of livestock and is associated with its weight losses. Therefore, of great importance is a review of the dislocation of enterprises in accordance with the principles of production concentration and specialization and with due regard for the shortening of the distances of livestock delivery in a radius of up to 150 km.

For each raw material zone it is necessary to work out a long-term plan for the development of animal husbandry and for the delivery of livestock for slaughtering for the next decade and to determine the raw material resources of enterprises and the required capacity for the slaughtering and processing of livestock and for the production of meat products. In accordance with the planned capacity for the production of meat and meat products, it is necessary to work out long-term plans for the technical retooling of existing and the construction of new enterprises, as well as plans for the liquidation of small, poorly equipped enterprises located in the raw material zones of larger enterprises and not having prospects for development.

To help sectorial management bodies and enterprises in the development of plans for a rise in the technical level of production, scientific research and planning organizations should develop, with respect to each type of enterprise, recommendations for its technical equipment, which contain a list of advanced types of equipment and technological processes.

Plans for the dislocation of enterprises and for the construction of new and reconstruction of existing enterprises developed and coordinated with local bodies should serve as the basis for the general sectorial plan for the technical retooling of the meat industry as a whole and for the determination of the need for equipment, other material resources and capital investments.

In our opinion, ministries of the meat and dairy industry of the Union republics, associations and enterprises should concentrate their attention on the solution of the above-raised problems. Not waiting for directives "from above," every association and enterprise must develop specific proposals and submit them to the bodies for the management of the agroindustrial complex and the sector for consideration.

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AGRICULTURAL MACHINERY AND EQUIPMENT

NEW MINITRACTOR IN PRODUCTION AT KIEV PLANT

Production Operations Described

Moscow IZVESTIYA in Russian 19 Aug 83 p 1

[Article by Ya. Oleynichenko in the column "Reporting from the Scene": "The All-Purpose 'Malysh'"]

[Text] Experts at the Kiev plant imeni Lipse are turning out a new minitractor. In its technical documentation, the motorized unit has been "christened" the MTZ-0.5 [Minsk tractor plant]. It has been designed for use in gardening and truck-farming, hothouse operations, and the cultivation of private plots.

We roll the vehicle out the plant door and start the engine. I take to the controls and "drive" the minitractor. I have shifted into higher speed.

"Don't speed", laughs A. Nevshupa, the plant's assistant chief production engineer. "You're right up to the limit now--beyond 9 kilometers per hour". It was designed for load hauling. One need only attach a specialized trailer to the motorized unit.

The unit is capable of operating with an attached plow, cultivator, hiller or harrow, mower or potato digger, depending on particular requirements. The machine can completely cultivate an area of .12 hectare, or mow a .29 hectare-size lawn in the space of one hour. The fuel tank, which holds up to 6 liters of A-72 or A-76 gasoline, is sufficient for 6-7 hours of operation...

How is the production of this innovative product, eagerly awaited by consumers, progressing at the plant? I put this question to the head of the engineering laboratory, A. Sandugey.

"The Melitopol motor works and the Ternopol combine will take part in the development of the first Ukrainian-produced minitractor. The Kamenets-Podol'skiy agroequipment plant has undertaken manufacture of the harrows and cultivators, and the Kirovograd 'Red Star' is developing a universal mini-planter.

"We have finished the first test run of transmissions, which we forwarded to the Minsk tractor plant. Our Belorussian colleagues have successfully produced a similar motorized unit of proven reliability. We have concluded negotiations for a joint venture: the Kiev people will supply the transmissions, and the Belorussians will furnish us with the other necessary components. With help from Minsk, we expect to release the first run of motorized units as early as this year.

Features for Private Plots

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 2 Nov 83 p 1

[Article by O. Glebov: "Minitractor Launched"]

[Text] At first, the whole thing seems rather extraordinary: a midget tractor weighing all of 135 kilograms is easily pulling a trailer on which more than half of a ton has been loaded. But if a plow is attached--a tiller, a harrow or cultivator--as one would expect, it works the garden. The machine has been programed for everything: it can plant and dig potatoes, water the garden, operate on any terrain--even in a ravine. Within something like an hour, it will fly through 12 one-hundredths of a truck garden or cut 29 one-hundredths of a meadow. And this is not an advertising claim, but verifiable fact.

Under the watchful gaze of the head of the engineering laboratory, A. Sandugey, I steer the minitractor, brand new and reeking of fresh paint, out into the plant's back lot. Upshifting the speed control, I set out for a drive.

"A real dare-devil," laughs the assistant chief production engineer, A. Nevshupa. From wont of practice, I had selected the highest speed--9 kilometers per hour, while the normal operating speed is lower.

But I soon came to the realization that speeding about in high enthusiasm is not the proper approach. The tractor is small, but concerns about it are many. There are about 300 individual components. In order to manufacture only those of them that will be turned out here, at the Plant imeni Lepse, 700 nomenclatures of equipment and instrumentation are required. Meanwhile, the collective has undertaken short-term adjustments of the assembly line production of the minitractors.

"We ourselves would not have been able to turn out a test run during these months," says A. Nevshupa, "if it had not been for the help of the Minsk tractor design engineers--the creators of the new machine."

This help comes in various forms--components as well as consulting specialists.

The Kievans also are experiencing a speed-up--production planning is proceeding at a rapid pace here. Engineering processes have already been worked out for the machining of assembly components, as well as for painting and corrosion proofing. Areas have been marked off for the installation of equipment. At weekly conferences devoted to new technology presided over by the general director, V. Zlobin, the minitractor, or, as it is officially termed, the "MTL-0.5"

motorized unit, is the number one topic of discussion. The question of its production has been brought before a meeting of the party committee. A chart depicting the results of the implementation of organizational and technological measures is very closely monitored. It is understood by all that there is a great need for this machine, and consequently, there is great desire to respond to the needs of the people, not with promises, but with action.

In addition to the Plant imeni Lapse , a great many other firms are participating in the successful production of the new tractor.

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AGRICULTURAL MACHINERY AND EQUIPMENT

PROBLEMS IN MAINTENANCE, REPAIR WORK DISCUSSED

Saratov STEPNIYE PROSTORY in Russian No 9, Sep 83 pp 4-6

/Article by B.A. Kasimovskiy, deputy chairman of RSFSR Goskomsel'khoztekhnika and Candidate of Technical Sciences: "Problems of Agriculture's Chief Partner"/

/Text/ The successful carrying out of measures aimed at implementing the Food Program is unthinkable in the absence of efficient and harmonious work by all elements of the agroindustrial complex, one partner of which is RSFSR Goskomsel'khoztekhnika. Its role consists mainly of carrying out efficient and timely deliveries of machines to specific farms and providing training to machine operators in the maintenance and use of new equipment and also in organizing the production of certain needed machines, mechanisms and devices.

Interesting experience has been accumulated in Stavropol Kray. Last year the following items of equipment were either produced or re-equipped: 500 large hay wagons and 463 toothless drag harrows for powerful tractors, 657 harvesters with general-purpose rakes for the harvesting of lodged graincrops, 93 SK-5 combines for harvesting corn for grain and so forth. This made it possible to raise the productivity of the machine-tractor pool and to lower labor expenditures by up to 30 percent.

An increase in the level of mechanization of agricultural production is inseparable associated with the further introduction at kolkhozes and sovkhoses of industrial technologies for the cultivation of sugar beets, soybeans, sunflowers, potatoes, corn for grain and vegetables. The mastering of new methods has already been in progress for 4 years. This year almost all of the grain corn on farms throughout the republic is being grown using the new technology, soybeans -- 85 percent, sugar beets -- 43 percent and sunflowers -- on 23 percent of the areas. The conversion over to an industrial technology for the cultivation of potatoes (4 percent) is proceeding slowly.

Positive experience in mastering the technology for sugar beet cultivation is to be found in Voronezh Oblast. Approximately 2,000 root cleaners and 1,500 sweeper harrows have been produced here. In all, 3.6 million rubles worth of equipment have been produced. The workers in Voronezh Oblast were some of the first to master the technological process for hermetically sealing the bodies of trucks using foam-polyurethane. The following items of equipment are being introduced into operations in Kursk Oblast: non-coupling triple-sowing machine

units, beet loaders produced at the site, toxic chemical mixers, sugar beet ridgers and cultivator devices for applying ammonia liquor. A hydraulic device for the opening and closing of the sides of tractor trailers is being employed extensively. Over a period of 2 years, 3,500 kits for use with grain harvesting combines in the harvesting of lodged grain crops have been produced. Many valuable and useful developments have been introduced into operations on farms through the efforts of Saratov oblsel'khoztekhnika and others.

It is known that a great amount of manual labor is being employed in the cultivation of vegetables at the present time. The conversion over to the use of industrial technologies for these labor-intensive crops is lowering labor expenditures noticeably. In Saratov Oblast, for example, they have decreased in the case of carrot cultivation from 7.86 to 4.2 manhours per hectare, or by almost twofold. The production costs for the products have also decreased.

The program for the technical re-equipping of agriculture throughout the country calls not only for an increase in the delivery volumes for new machines and improvements in their quality, but also for large-scale measures aimed at improving the organization of equipment usage and also the servicing and repair of equipment.

Unfortunately, by no means is full use being made of the technical potential embodied in the agricultural machines. In a number of regions throughout the country, the daily output per tractor or grain harvesting combine does not exceed 75-80 percent of the norm. Notwithstanding a stable trend towards an annual reduction in specific expenditures for equipment maintenance, with regard to its balance value, these expenditures still continue to remain high. The total amount of absolute expenditures for the repair and operation of the machine-tractor pool are increasing from year to year and already are being expressed in terms of several billions of rubles.

The utilization of large capital investments for the technical re-equipping of agriculture requires that the greatest return be realized from use of the machine-tractor pool. Each machine being delivered to a farm must promote growth in labor productivity and an improvement in the productivity of the fields and farms.

In order to solve these tasks, it is necessary first of all to improve the technical servicing of the agricultural equipment, a component part of which is the high quality restoration of worn out parts. Experience testifies to the fact that only 20 percent of the parts of tractors undergoing capital repair can be discarded completely and that 20-45 percent are suitable for further operation. The service life for the remaining parts can be extended. Such a ratio is typical of many types of machines. Hence, approximately one half of all parts are suitable for repair.

In the process involving the restoration of worn out parts, the number of production operations is reduced by a factor of 5-6 compared to the production of new ones. As a rule, the production costs do not exceed 60-70 percent of the prices for new parts.

At the present time, the proportion of restored parts at many repair enterprises of Sel'khoztekhnika constitutes 40 percent of the overall volume of spare parts. The restoration of parts, which makes it possible to realize savings in labor, metal and other expenditures, is a many-sided problem. It is inter-departmental in nature and the solution for it is based upon joint and comprehensive works by the branch institutes and the leading practice of repair enterprises.

Within the USSR Goskomsel'khoztekhnika System, a general plan is being carried out for developing production operations in connection with the restoration of worn out parts up to 1990. The chief trend in the development of this branch is the creation of large-scale specialized enterprises and departments, equipping them with highly accurate and highly productive equipment, introducing mechanized production lines and making extensive use of the most effective methods for restoring parts. According to estimates by specialists, more than 20 percent of the overall volume of part restoration work can be carried out on mechanized production lines. The restoration of parts, similar to any engineering endeavor, cannot tolerate either oversimplification or amateurish work. The technology must be based upon the use of modern scientific-technical achievements.

At the present time, welding and fusion methods for the restoration of parts are being employed most extensively. In the opinion of scientists and specialists, these methods will predominate and in future years the task will be one of mechanizing and developing these processes to the maximum possible degree.

In collaboration with the Yaroslavl Motor Plant, new lines have been introduced for the restoration of crankshafts for YaMZ-240 engines. With the aid of specialists from the Altayskiy Motor Plant, a technology has been developed for restoring the crankshafts of A-41 and A-01 engines. A number of developments have been introduced based upon work carried out at branch laboratories and other organizations: plasma surfacing of pistons made out of aluminum alloys, contact welding of powder, contact welding of a belt to a shaft, restoration of parts using plastic deformation and so forth.

For developing and introducing a technology for restoring the links of a DT-75 caterpillar track, a group of workers attached to Goskomsel'khoztekhnika was awarded the Prize of the USSR Council of Ministers for 1983.

At raysel'khoztekhnika's and at plants, technical servicing stations and installation organizations and at bases, warehouses and motor vehicle establishments, work is constantly being carried out in connection with developing production operations, raising its technical level and the quality of the products being produced and improving production-technical support for agriculture.

The work of introducing new equipment has been organized well in the Saratov, Orel, Ryazan, Tula, Novosibirsk and Vologda obsel'khoztekhnika's and also in the Stavropol Kraysel'khoztekhnika. These associations are fulfilling the plan for the principal indicator -- economic effect. Many new innovations are being introduced into operations by the Leningrad, Kursk, Voronezh, Sverdlovsk, Amur and other oblsel'khoztekhnika's.

However, a number of associations are not coping with the plan. This includes the Gorkiy, Ulyanovsk, Chelyabinsk and Tatar ASSR associations. Here there is a shortage of specialists familiar with the new equipment. Quite often the measures for technical progress are planned without taking into account the economic effect and the expenditures required for introducing them into operations. RSFSR Goskomsel'khoztekhnika is receiving very few recommendations for awarding bonuses to enterprises and organizations. And this is a very important work indicator. No recommendations -- no work.

In discussing backward associations, special mention should be made regarding the reduction in the number of senior engineers for new equipment at the raysel'khoztekhnika's. Some leaders, failing to understand the essence of the problems concerned with technical progress under the new conditions and having received our instruction concerning a reduction in staff, transferred the functions of new equipment specialists over to engineers for equipment under warranty. This is what happened in Ulyanovsk and Gorkiy Oblasts and in the Tatar and Bashkir ASSR's. This mistake must be corrected by restoring the position of senior engineer for new equipment. Under present conditions, the failure to have an intelligent specialist of this profile within each raysel'khoztekhnika is the same as working with no good prospects for the future. And an engineer for equipment under warranty has frequent dealings with new machines, which still contain defects upon leaving the plant production lines. The combining of these two positions will inevitably result in a disruption in the plan for scientific-technical progress and prolonged periods of idle time for equipment under warranty.

In repair production operations, technical progress calls mainly for the introduction of mechanized lines. The number of such lines is increasing with each passing year. They are raising the productivity and culture of labor and the quality of the repair work. Last year, 48 percent of the tractors, almost one half of the combines and 86 percent of the motor vehicles and tractor and combine engines were repaired on these lines and by the end of the five-year plan there will be more than 1,200 such lines in the system. However, there have been incidents of the lines being turned over for operation while still incomplete.

Earlier the party and government devoted a great amount of attention to the development of efficiency and inventive work. On 20 August 1973, the CPSU Central Committee and the USSR Council of Ministers adopted the decree entitled "Further Development of Inventive Work Throughout the Country and Improvements in the Use of Discoveries, Inventions and Efficiency Proposals in the National Economy and in Raising Their Role in Accelerating Scientific-Technical Progress." During this same year the USSR Council of Ministers approved the new "Statute on Discoveries, Inventions and Efficiency Proposals."

The inventors and efficiency experts of the RSFSR Goskomsel'khoztekhnika have made a worthy contribution towards carrying out the tasks assigned by the 26th CPSU Congress. The principal indicator -- realizing an economic effect from the use of inventions and efficiency proposals -- was fulfilled by 111 percent, that is, it amounted to 23.1 million rubles against a plan calling for 20.7 million rubles. The return per ruble expended was in excess of 8 rubles. There are 35,600 efficiency experts and inventors working for the RSFSR Goskomsel'khoztekhnika.

For the development, examination and introduction of efficiency proposals in the associations, more than 50 experimental sectors have been created for developing and producing experimental models for the more valuable inventions and efficiency proposals. For example, in the Tatar ASSR an experimental sector attached to the Kazan Motor Vehicle Repair Plant produces experimental models of harvesters having rotary rippers, based upon a patent belonging to a group of inventors. In the Sovetskiy Branch of the Tula oblsel'khoztekhnika, a similar sector engaged in performing work on the proposals of efficiency experts and inventors realized an economic effect of 4,800 rubles in 1982.

There are 17 honored efficiency experts of the RSFSR working at enterprises and organizations of Goskomsel'khoztekhnika and 169 individuals bear the title of "Best efficiency expert of USSR Goskomsel'khoztekhnika."

An important invention has been introduced at the Saratov oblsel'khoztekhnika for the restoration of friction disks for the K-700 tractor, with use being made of a chemical-thermal method and a special compound. This invention produces an annual economic effect of 250,000 rubles. In 1983, this proposal resulted in 600,000 disks being returned to operations, with the products being shipped to 37 oblasts, krais and autonomous republics and also to other union republics. The production cost for restoring a disk is 48 kopecks and the price for a new one -- 5.20 rubles.

In those areas where proper attention is not being given to the problems concerned with the development of efficiency and inventive work, the indicators are extremely low. The 1982 task for realizing an economic effect from the introduction of inventions and efficiency proposals was fulfilled by the Gorkiy and Volgograd oblsel'khoztekhnika's by only 32 percent.

One reason for the low operational indicators in the development of new innovations is the weak work being carried out in connection with planning the use of proposals and also their selection and introduction into operations on an extensive scale. The leaders of enterprises and organizations are not devoting adequate attention to the carrying out of inspections and competitions organizing exhibits dealing with inventions and efficiency proposals or composing thematic plans on production bottlenecks and other organizational measures.

Important work is being carried out in the associations in connection with the restoration of new equipment that is still under a production plant warranty.

A network of support bases for the plants has been created and business-like collaboration organized with them. As a result, a trend has been observed towards reducing the quantities of equipment that is defective and yet still under warranty.

Today one out of every four K-700 and T-150K tractors, 18 percent of the grain harvesting combines and more than one half of the beet harvesting and feed harvesting machines are operating under plant warranties. In all, there are approximately 100,000 units of equipment under warranty for all types of equipment. According to data submitted for the first 6 months of 1982, the following types and quantities of equipment were defective: 505 powerful

tractors, 720 KSK-100 and KPS-5G machines (7 percent), 29,500 grain harvesting combines (approximately 2 percent) and also 670 beet machines (approximately 4 percent of those under warranty).

What is preventing the rapid restoration of this equipment? The data obtained indicates that in those instances where the fault of a plant is recognized (and this covers roughly one third of all machines which break down), the restoration work is carried out relatively quickly. But equipment which broke down owing to fault on the part of farms is doomed to lie idle for extended periods of time. In such instances, a very important role is played by our engineer for equipment under warranty. Everything depends upon his work in solving a specific problem. Each day of idle time for a machine increases the degree of loss to a farm.

Purposeful scientific-technical information, propaganda and advertising must promote the carrying out of the decisions handed down during the May and November Plenums of the CPSU Central Committee and practical interaction with the kolkhozes and sovkhozes and with all branches of the agroindustrial complex in striving to increase the output of field crop husbandry and animal husbandry.

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AGRICULTURAL MACHINERY AND EQUIPMENT

EQUIPMENT PREPARATIONS FOR SPRING FIELD WORK

Moscow SOVETSKAYA ROSSIYA in Russian 26 Oct 83 p 1

[Article: "In the RSFSR Council of Ministers"]

[Text] The Presidium of the RSFSR Council of Ministers has adopted a decree calling for the timely and high quality preparation of the machine-tractor pool of kolkhozes and sovkhoses for the 1984 spring field operations. In the decree, mention is made of the fact that improvements have been achieved recently in the use of the equipment and yet many shortcomings still persist with regard to organizing repair operations for the machines. Last spring, from 10 to 30 percent of the tractors were not prepared for moving out onto the fields in Novgorod, Kostroma, Kirov, Tomsk and Irkutsk Oblasts, many powerful K-700 and T-150K tractors lay idle and in many oblasts delays were tolerated in placing grain harvesting and especially silage harvesting combines in operation.

For the forthcoming season, the task has been assigned of organizing the repair operations in a manner such that the principal bulk of the agricultural equipment will be placed in working condition during the autumn and winter period, the sowing and soil-tilling machines -- no later than 1 January and the grain harvesting combines and hay harvesting machines -- by the commencement of field operations and the potato harvesting and beet harvesting combines -- by 1 July 1984. Special attention has been given to the need for introducing scientific achievements and leading practice into operations in a more energetic manner and to making more extensive use of cost accounting procedures and collective contracts. The ASSR goskomsel'khoztekhnika's and the kray and oblast sel'khoztekhnika's must expand the nomenclature and volumes of restored spare parts and make them available for sale to the kolkhozes and sovkhoses as marketable products.

During this same meeting, the Presidium of the RSFSR Council of Ministers approved the initiative displayed by machine operators in the Mary ASSR and Orenburg Oblast, who undertook the obligation of completing repairs on their agricultural equipment considerably earlier than the periods established for the republic as a whole. For example, the plans call for the grain harvesting combines and irrigation equipment to be placed in operation prior to 1 April and the feed procurement machines -- prior to 1 May. In connection with its plan for launching a socialist competition for the timely and high quality

preparation of the machine-tractor pool, the Presidium of the RSFSR Council of Ministers has in particular requested the organization of double-shift operations for the enterprises of sel'khoztekhnika. In addition, it has asked that the kolkhozes and sovkhoses be supplied with skilled machine operator personnel for the double-shift operation of equipment.

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FORESTRY AND TIMBER

LAGGING TIMBER PROCUREMENT MATTER OF CONCERN

Moscow AGITATOR in Russian No 17, Sep 83 pp 28-29

[Article by V. Tatarinov, chief of the Department of Timber Industry and Forestry of USSR Gosplan: "Responsibility of Forestry Workers"]

[Text] Since 1970, the output of the forestry, wood-working and pulp and paper industry of our country has increased by a factor of more than 1.5. The production of fiber board panels has increased by a factor of 2.3, chip board -- by 3, paper -- by a factor of 1.3, including newspaper -- by 44 percent and cardboard -- by 39 percent and furniture -- by more than twofold. However, the development of the branch and especially the production of lumber badly needed for the national economy has already been held up for a number of years owing to a reduction in wood procurements.

Here is some data in this regard: during the 8th and 9th Five-Year Plans, owing to the placing in operation of a number of new lumber industry farms and supplying the timber procurement specialists with new equipment, the production of lumber increased by 39 million cubic meters and in 1975 reached 310 million cubic meters. But subsequently, during the 10th Five-Year Plan, it decreased by 35 million cubic meters and during 1981-1982 -- by three more million cubic meters. In 1982, the enterprises of USSR Minlesbumprom /Ministry of the Timber, Pulp and Paper and Wood Processing Industry/ furnished almost 23 million cubic meters less of lumber than the figure called for in the plan.

This year the level of wood procurements has stabilized, but it is still not increasing and the plan for wood shipments, just as in the past, is not being fulfilled. This is causing great harm to the national economy. The lumber requirements of the sawmill, pulp and paper, mining industries, agriculture and transport are systematically not being satisfied. As a result of serious interruptions in timber deliveries, the erection of housing for construction purposes is being dragged out.

Naturally, such a situation is unacceptable and has been a source of considerable concern for some time. At the end of last year the leading organs called for large-scale additional measures aimed at ensuring that the timber procurement enterprises were properly supplied with modern equipment and material resources.

At the present time, the enterprises of Minlesbumprom have adequate supplies of fine equipment at their disposal. If utilized in an intelligent and intensive manner, this equipment will make it possible to increase the wood procurements considerably and at the same time it will release a large number of workers from having to perform heavy manual labor.

But it is unfortunate that this effective and by no means cheap equipment is not being utilized at its full capability and is producing only a limited return. Here are just two examples. Last year, LP-18A non-choker-skidding machines were utilized an average of only 131 days throughout the ministry and at timber industry farms of Sverdlesprom -- 159 days. Certainly, this indicator is not very high and yet if it was achieved in all areas the pool of machines would be able to carry out 8 million more cubic meters of skidding work without the use of manual labor. Tree trimming machines were employed an average of only 147 days throughout the branch and at the Karellesprom Association -- 169. If this not too high indicator was achieved by all of the country's timber industry farms, it would be possible to reduce the volume of manual tree trimming work by more than six million cubic meters and thus release approximately 3,000 workers from having to perform this operation.

The experience of many leading machine operators and drivers reveals that by strictly observing the rules for equipment operation and performing one's tasks in a diligent and conscientious manner, it is possible even to exceed even the planned productivity for the units. Thus, last year more than 100 machine operators had an annual output for their cutting-stacking LP-19 machines of more than 40,000 cubic meters, 20 machine operators -- more than 50,000 and machine operator M. Baskova at the Turmanskii Timber Industry Farm in Irkutsk Oblast -- approximately 70,000 cubic meters.

The high potential possessed by felling-skidding machines is borne out by the experience accumulated in their use at the Pinchugskii Timber Industry Farm in Krasnoyarsk Kray, where their average annual output was 19,000 cubic meters. The average indicator for the branch was considerably lower.

A similar picture emerges with regard to the use of self-propelled tree trimming machines, each of which replaces 6-8 workers. Last year, in the Karelian ASSR, machine operator G. Smirnov raised the output for such a machine to 37,600 cubic meters, Hero of Socialist Labor P. D'yakonov -- to 39,000 and for USSR Minlesbumprom as a whole it amounted to less than 15,000 cubic meters. These then are visible and real reserves.

Great results may be realized from the extensive development of new and proven technologies. This includes, for example, the skidding of trees using non-choker tractors not by the butt ends, as has been the tradition, but rather by the tops. This increases the workload per trip, the cross country capability of a tractor is improved and seedling growth sustains less damage. At timber industry farms in Arkhangelsk Oblast, an interesting method has been introduced for employing self-propelled tree trimming machines for the trimming of branches, with simultaneous sorting of the tree length logs by strains, partial removal of the bark from them when preparing for rafting, trimming the butt ends and stacking the branches and twigs for portage purposes. In the process, the productivity of the machines is raised by almost one third.

A priority task of the timber procurement specialists is that of raising the proportion of lumber obtained from their overall procurements. At the present time, the situation is just the reverse -- the yield of round lumber from the overall volume of wood shipments decreased from 75 percent in 1975 to 69 percent in 1982. There are many reasons for this: the technology is not followed, tree length logs are spoiled due to careless tractor operations, they are not cut and sorted in the correct manner and a portion of the valuable types of wood is used unjustifiably for firewood. A reduction in the yield of round timber also occurs owing to the untimely preparation of the tree length logs added to the inter-seasonal supplies. Quite often they lie around for several years, after which at the very best they are suitable only for firewood. Such losses are unacceptable.

There are many examples available for the timber procurement specialists to follow. Within the branch there are many leading collectives and production innovators who have proven their worth by implementing creative improvements in the technology and labor organization and in the skilful use of equipment.

Each working moment in behalf of the task -- such is the slogan of the brigade headed by the recipient of the USSR State Prize A. Vatrassov at the Komsomol'sk Timber Industry Farm in Tyumen Oblast. The production cost for a cubic meter of wood by this collective is the lowest in the association. At this same timber industry farm, the consolidated brigade of Hero of Socialist Labor P. Popov is successfully overfulfilling its tasks. This year it undertook the task of procuring 250,000 cubic meters of wood. Here, at the Komsomolsk Timber Industry Farm and also at the Olenino Timber Industry Farm in Kalinin Oblast and at the Sergeyevka and Tysk Timber Industry Farms of the Dal'lesprom Association, all-round cross-cutting and loading brigades have proven their worth at lower timber yards. Working in behalf of one order and with payment based upon the final result -- the shipment, they are employing mutual assistance and interchangeability on an extensive scale, they are utilizing each moment of time in an intelligent manner and they have achieved considerable increases in labor productivity and in the yield of lumber.

The study and dissemination of progressive initiatives which have developed within the branch and also the leading experience that has been accumulated here would make it possible to bring about radical improvements in the status of affairs and increase considerably the volume of timber procurements. Certainly, this is primarily a concern of the leaders of all ranks and yet much depends upon the work carried out by rank and file forestry workers -- upon their qualifications and experience and upon their ability and readiness to employ boldly and intelligently new equipment, technology and production organization and new work methods which initially are unfamiliar but which hold the promise of good results.

For the sake of fairness it must be stated that the machine builders must accept a considerably amount of responsibility for the lag in timber procurements. With regard to the equipment required for the complete mechanization of operations on the wood lots and in the lumber yards, they are still producing fewer units than the number required. Many of the machines being made available for forestry work are not sufficiently reliable and quickly break down. In combination with systematic non-deliveries of spare

parts and units and also a low technical level for the repair base, the end result is machines which determine the tempo of the timber procurement work lying idle undergoing repairs or awaiting repairs for an average of more than 100 days annually and VM-4 stacking machines -- as much as 194 days.

Properly speaking, herein lies the chief reasons for the lag in timber procurements. The period when this work was carried out by a great number of people equipped at best with simple power saws and tractors has receded irrevocably into the past. Today the plans must be carried out with a considerably fewer number of people using powerful equipment. But even this equipment quite often fails to do the job and at times the timber procurement specialists do not use it in an intelligent or thrifty manner. Hence the chief task consists of improving substantially the quality of the machines being employed in the forests, creating a repair base in keeping with today's requirements, raising the skills of the personnel, strengthening technological and labor discipline in the collectives of timber procurement specialists and restoring proper order in all areas.

Order is still lacking in the organization of wood shipments and the construction of reliable year-round logging roads has fallen behind. The branch's requirements in this regard have been satisfied by less than 60 percent, with more than 40 percent consisting of many thousands of dirt and winter roads which are completely dependent upon the weather conditions and which are unsuitable for wood shipments for a considerable period of time. In order to correct this situation, 9,000-10,000 kilometers of permanent logging roads must be built annually, that is, one and a half times more than the present figure.

The timber procurement specialists complain regarding a shortage of road construction equipment. To a certain extent, they are correct. However, checks have revealed that very poor use is being made of the machines that are available -- even during the summer months, as a rule only one third of the bulldozers and one half of the dump trucks and powered graders are being used for the construction and repair of roads, with their coefficient of shift work being just slightly more than one. In the case of a number of associations, very poor use is being made of narrow gauge railroads for the transporting of timber. Just as in previous years, the plans for the river rafting of wood are not being fulfilled. In short, a requirement exists here for a radical change for the better. Under present conditions, the cutting down of the required number of trees does not constitute a problem. But in the forests themselves, there is nobody who needs the tree length logs and at times they accumulate over the years in the manner of "memorials" to somebody's mismanagement.

The Soviet State is displaying concern for the forestry workers and is allocating considerable resources for improving their working and living conditions. Last year the plan for placing housing units in operation was fulfilled at all of the timber procurement associations. The branch's plan for building children's pre-school institutes, polyclinics and professional-technical institutes was also fulfilled. But a great deal of work still remains to be carried out if proper living and cultural conditions are to be created for the lumber jacks in all areas. And this work must be carried out in order to lower the as yet too high turnover in manpower and also to solve the

complicated and very important problem of creating permanent and highly skilled cadres of personnel. These personnel should be capable of overcoming the branch's extended backwardness and achieving improvements in the procurements of wood.

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